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JULY 17
1941

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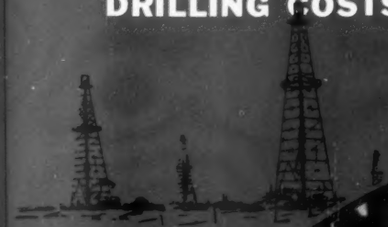

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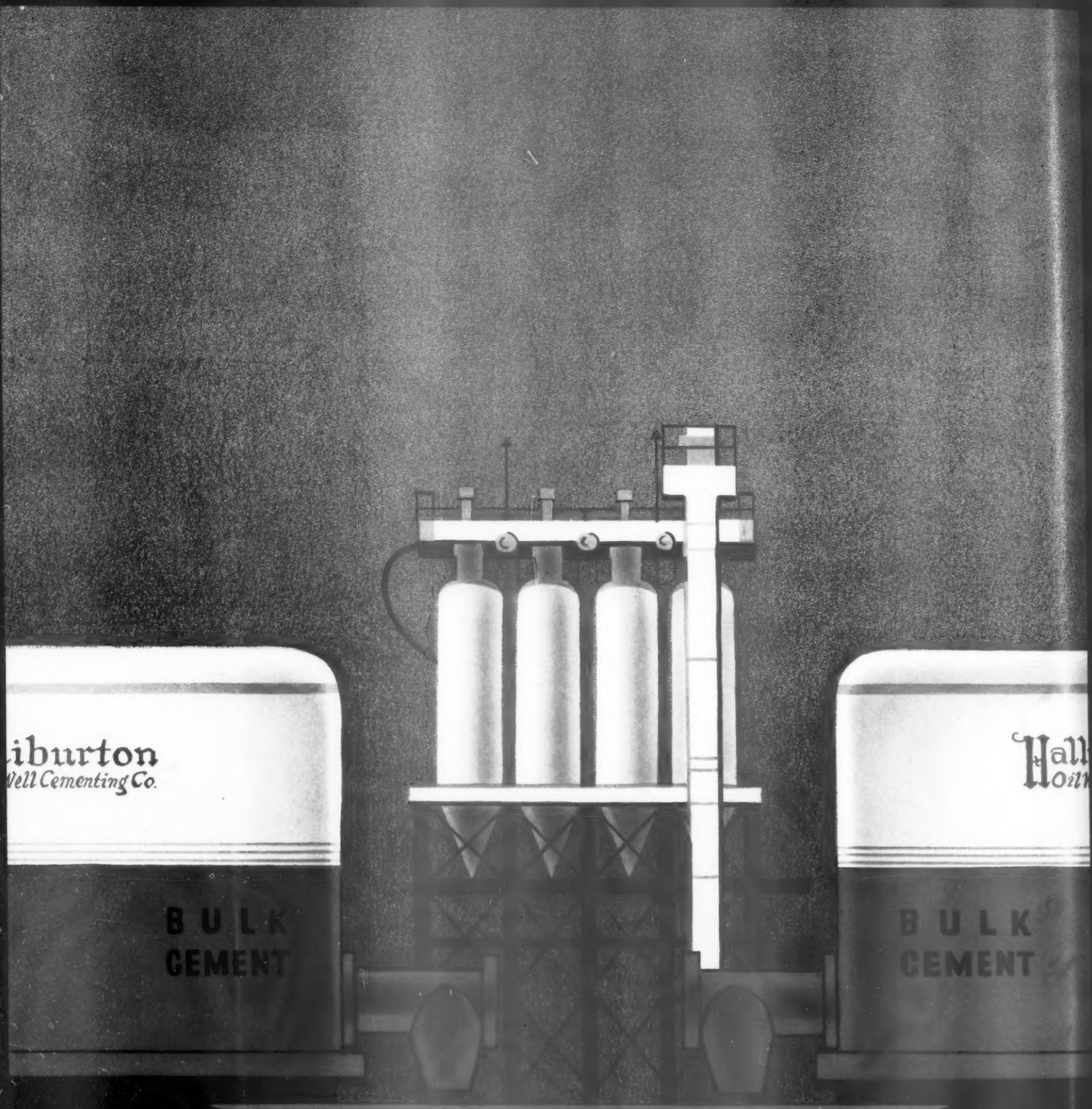

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HOME OFFICE, 211 S. CHEYENNE, TULSA
PHONE 3-6291

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SUBSCRIPTIONS: United States, 1 year, $6.00; 6 months, $3.00. Elsewhere, 1 year, $7.00; 6 months, $3.50. SINGLE COPIES: 20 cents each. Back copies, when over a year old, 50 cents. CHANGES OF ADDRESS reaching the Tulsa office of the Journal by Saturday take effect with the following issue.

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ECONOMIZE . . . OR AGONIZE

ALTER EGO: Literally, "one's other self"—the still, small voice that questions, inspires, and corrects our conscious action

Sure arc welding is a cost-cutter but that's not the rub, we just haven't time to think about changing over now.

ALTER EGO: Why *think* about it? *Do* it!

Whoa! What's the hurry?

ALTER EGO: Hurry? Glance around you! See how others are hurrying over fast. If we wait until the business slump gives us time, it will be time out, for all time. It's *economize* right now with welding . . . or *agonize* right after.

All right then, how do I start?

• •

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Trends

Additional Tankers To Be Taken From Coastwise Services

REPORTS the first of the week indicated tanker operators would be asked by the Government to release additional units for domestic defense and British war service. It is said the program calls for the requisitioning of 14 tankers within the next 30 days, with the number expanded to at least 50 before the end of the year. It is understood the expanded needs of the United States Navy, as well as the British war requirements, are responsible for this program which, if carried out, will mean that in another 6 months the petroleum industry in this country will be called upon to operate with approximately 65 per cent of its normal coastwise tanker service. In this connection it is known that some of the large tankers now under construction for private oil companies will be delivered to the Navy as they come off the ways this year and during 1942. It is pointed out that as the operations of the Navy expand to distant points, substantial increases in tanker carrying capacity will be necessary.

CRUDE PRODUCTION *3,874,050 bbl. daily average—up 225,330 bbl. One year ago 3,563,984 bbl.*

CRUDE STOCKS *258,070,000 bbl. as of July 5—down 1,329,000 bbl. One year ago 261,732,000 bbl.*

GASOLINE STOCKS **89,561,000 bbl. as of July 12—down 503,000 bbl. One year ago 91,971,000 bbl.*

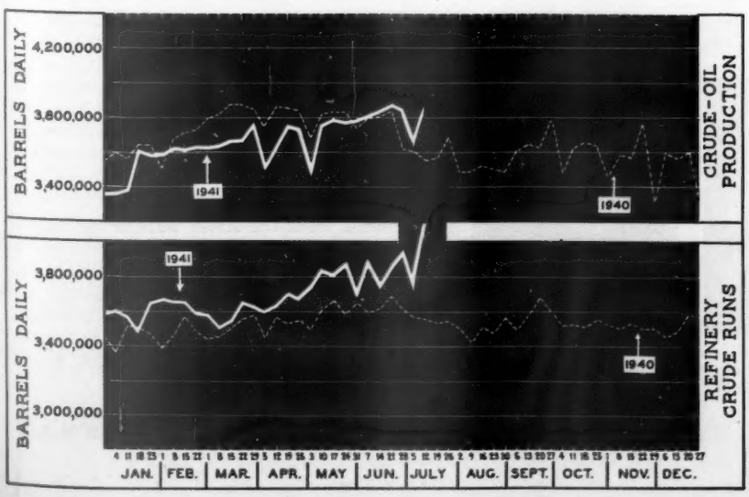
RESIDUAL FUEL-OIL STOCKS *92,699,000 bbl. as of July 12—up 64,000 bbl. One year ago 105,103,000 bbl.*

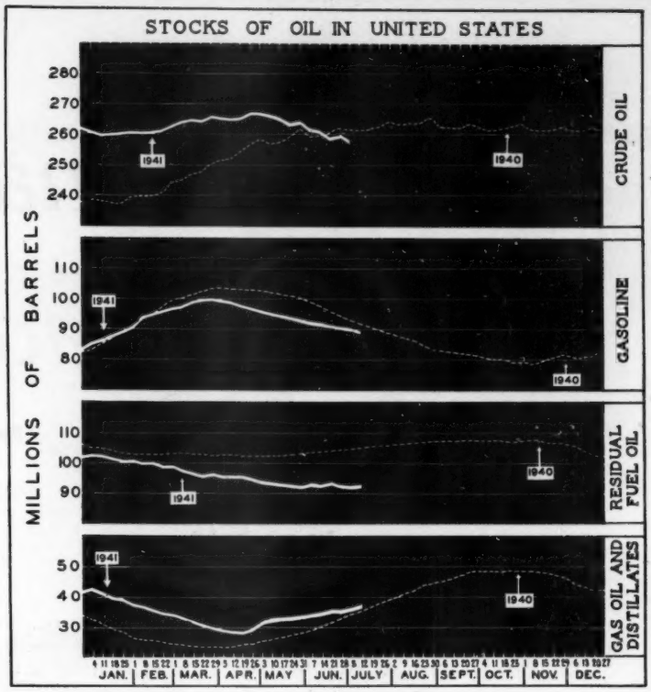
GAS OIL AND DISTILLATES *37,812,000 bbl. as of July 12—up 887,000 bbl. One year ago 35,653,000 bbl.*

REFINERY RUNS *4,090,000 bbl. daily week ended July 12 — up 345,000 bbl. One year ago 3,565,000 bbl.*

*Includes 7,577,000 bbl. aviation motor fuel, up 45,000 bbl. One year ago, 5,338,000 bbl.

This program as to the future comes at a time when there is reason to believe the industry will be able to offset the requisitioning of the first 50 tankers without serious inconvenience to its domestic customers. Several operators in close touch with conditions over the past month are confident the threat of petroleum rationing is over, so far as the first 50 tankers are concerned. The industry has been able to do this by making use of every transportation facility and makeshift available. This includes deeper loading, reduction in loading and unloading time, rearrangement of routes and wider use of inland waterways, pipe lines and tank cars. It is felt these emergency operations will assure a sufficient movement of crude oil and products so that no serious shortages for customers will develop pending the completion of the major pipe-line-construction programs now under way.





DAILY AVERAGE PRODUCTION FOR WEEK

	July 12, 1941	Bur. Mines July est. of demand	July state allowables	July 5, 1941
Arkansas	72,330	77,000	73,748	72,535
California	647,250	624,800	601,939	614,500
Eastern fields	113,000	124,300	.....	114,100
Illinois	337,405	384,800	.....	339,460
Kansas	233,800	225,300	237,400	241,150
Louisiana	314,105	304,000	303,397	315,020
North Louisiana	*74,205*	.....	.....	*77,070*
Louisiana Gulf Coast	*239,900*	.....	.....	*237,950*
Michigan	39,630	37,200	.....	39,810
Mississippi	42,165	21,000	.....	33,830
Nebraska	4,925	4,200	.....	4,650
New Mexico	108,750	108,600	108,600	113,850
Oklahoma	414,100	498,500	415,000	433,275
Rocky Mountain states	109,590	113,400	.....	105,840
Texas	1,437,000	1,324,000	1,300,749	1,220,700
East Texas	*372,950*	.....	.....	*300,600*
West Texas	*265,200*	.....	.....	*218,250*
North Central Texas	*133,500*	.....	.....	*128,450*
East Central Texas	*84,300*	.....	.....	*76,300*
Texas Panhandle	*84,050*	.....	.....	*84,050*
Texas Gulf Coast	*402,150*	.....	.....	*332,450*
Southwest Texas	*94,850*	.....	.....	*80,600*
Total United States	3,874,050	3,847,100	.....	3,648,720
Total production, Jan. 1-July 12, 1941		684,048,110 bbl.		
Same period last year		697,832,379 bbl.		

It is agreed the domestic industry cannot balance its present supply and demand if another 50 tankers are removed from coastwise service over the next few months. Government officials are said to be aware of this situation and hope to solve the problem through more efficient use of petroleum products and direct rationing of use, if necessary. Some of the economy measures suggested approach the ridiculous and will be attacked by representatives of the petroleum industry if they are ever seriously offered as a solution for demand problems confronting the industry.

No weaknesses have developed in the industry's exceptionally strong market position. The demand for crude oil in Oklahoma, Kansas and Illinois exceeds the pipe-line supplies, and conditions have improved in coastal fields.

Oil Coordination Program Is Nearly Ready to Function

By HENRY D. RALPH

WASHINGTON, D. C., July 14.—Following the appointment Saturday of a general committee and 20 regional committees representing the petroleum industry, it is expected this week that Secretary of Interior Ickes, as petroleum coordinator, will complete the government-industry organization with the selection of district staffs and the establishment of the district offices.

It has not been indicated where the five district offices will be located and there have been no announcements as to who will be selected for the district offices. It is believed that the offices will be largely staffed with men now employed in the Department of Interior. It is said that applications have been received from both within and outside the industry for employment in the district offices.

The organization program as discussed here is similar to that set up during the N.R.A. days. The district offices will be the headquarters for the regional committees which have charge of all matters pertaining to the section in which they are located. The regional committee will also report to the general committee which is composed of the chairman from each district. The general committee will have direct contact with Secretary Ickes and Ralph K. Davies, deputy coordinator.

The district offices will gather information which will be made available to the Washington offices. They will disseminate information to the industry and furnish individual operators with reports that have to do with the regulations Washington will announce from time to time. Priority regulations are typical of the information which will be made available from the district offices when the organization plan is completed.

Saturday Mr. Ickes announced the appointment of a general district committee for each of the five districts in the United States, consisting of a general chairman and the chairmen of the four district functional committees.

Four functional committees were appointed for each of the five districts. These committees are designed to advise the coordinator with respect to the problems encountered in the four branches of the petroleum industry—namely, the production, refining, transportation and marketing branches.

"I recognize both the necessity and difficulty of selecting competent, experienced and completely representative committees to cope with the enormously important tasks that lie ahead," Mr. Ickes said, explaining his departure from the original plan. "It has therefore seemed wise not to foreclose the appointment of additional committee members within the near future in the light of a clearer appraisal of the local situation in each district and a more definite crystallization of industry opinion.

"This is particularly true in the producing and marketing branches of the industry where, because of the numbers engaged, there is as yet no reasonable unanimity of opinion as to those who may be deemed representative of the many different interests in these fields. I shall expect both the industry and the committees as presently constituted to give this subject immediate consideration."

Functions of the committees were outlined in the official notification from the coordinator to the appointees as follows:

"The duties of the committee shall be to advise and consult with me and with the deputy coordinator and local representatives to be designated on matters relating to the proper coordination of the activities of the petroleum industry for national defense, as set forth in the president's letter of May 28, and in that same connection to assist in the performance of such specific recommendations or directions as may be issued."

District 1 consists of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia and Florida.

District 2 consists of Ohio, Kentucky, Tennessee, Indiana, Michigan, Illinois, Wisconsin, Minnesota, Iowa, Missouri, Oklahoma, Kansas, Nebraska, South Dakota, North Dakota.

District 3 consists of Alabama, Mississippi, Louisiana, Arkansas, Texas and New Mexico.

District 4 consists of Colorado, Utah, Montana, Wyoming and Idaho.

District 5 consists of California, Nevada, Arizona, Washington and Oregon.

The personnel of the committees is about equally divided between the larger companies and the independent producing, refining and marketing companies. The major companies have the following representation on the committees: Sinclair companies, 12; Texas Co. and Socony-Vacuum Oil Co., Inc., 11 each; Standard Oil Co. of New Jersey, 10; Continental Oil Co., 9; Standard Oil Co. of Indiana, 8; Shell companies, 7; Tide Water Associated Oil Co., 6; Standard Oil Co. of California, 5, and Phillips Petroleum Co., 4.

California leads the states with 39 representatives on the committees. The representation of other states includes: Texas, 33; New York, 20; Oklahoma, 14; Pennsylvania, 12; Wyoming, 12; Colorado, 12; Montana, 10; Illinois, 8; Louisiana, 5; West Virginia, 5; Missouri, 5; Ohio, 5; Kansas, 4; Indiana, 3; Arkansas, 2; New Mexico, 2, and several states, 1 each.

CHAIRMEN OF THE DISTRICT FUNCTIONAL COMMITTEES FOR THE FOUR BRANCHES OF THE INDUSTRY

ROBERT H. COLLEY
Atlantic Refining Co.

HARRY C. WIESS
Humble Oil & Refining Co.

B. L. MAJEWSKI
Deep Rock Oil Corp.

O. D. DONNELL
Ohio Oil Co.

PAUL G. BLAZER
Ashland Oil & Ref. Co.

GEORGE A. HILL
Houston Oil Co.

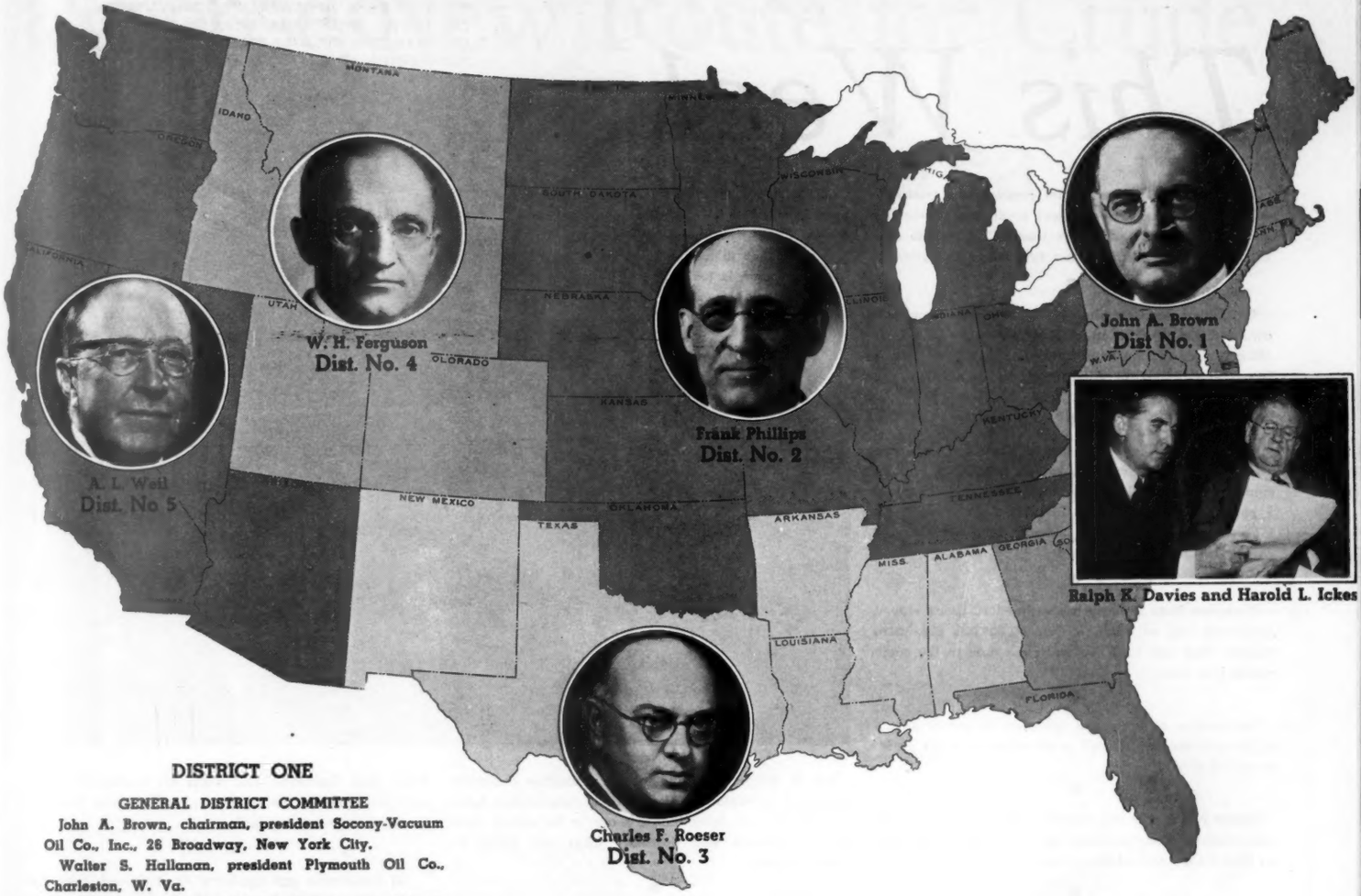
WALTER S. HALLANAN
Plymouth Oil Co.

C. S. BEESEMYER
Gilmore Oil Co.

W. L. STEWART, JR.
Union Oil Co. of Calif.

BURTON W. MUSSER
Utah Oil Refining Co.

District Chairmen Who Will Direct Oil Industry's Coordination for Defense



DISTRICT ONE

GENERAL DISTRICT COMMITTEE

John A. Brown, chairman, president Socony-Vacuum Oil Co., Inc., 26 Broadway, New York City.

Walter S. Hallanan, president Plymouth Oil Co., Charleston, W. Va.

R. H. Colley, president Atlantic Refining Co., Atlantic Building, Philadelphia, Pa.

W. A. Jones, president Cities Service Co., New York City.

H. W. Dodge, vice president Texas Corp., 135 East Forty-second Street, New York City.

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MARKETING COMMITTEE

Mr. Dodge, chairman; W. L. Faust, sales manager Socony-Vacuum Oil Co., Inc., New York; S. B. Eckert, vice president Sun Oil Co., Philadelphia, Pa.; L. T. Kittinger, vice president Shell Oil Co., Inc., 50 West Fiftieth Street, New York; M. H. Hindman, sales manager Pennsylvania Refining Co., Butler, Pa.; M. B. Whiting, president Whiting Oil Co., Clifton Forge, Va.; R. T. Haslam, vice president Standard Oil Co. of New Jersey, New York; J. W. Carnes, vice president, Continental Oil Corp., New York; Wiley Moore, president Wofford Oil Co., Atlanta, Ga.; Jacob Blaustein, American Oil Co., Baltimore, Mr.

DISTRICT TWO

GENERAL DISTRICT COMMITTEE

Frank Phillips, chairman, chairman of the board, Phillips Petroleum Co., Bartlesville, Okla.

O. Donnell, president Ohio Oil Co., Findlay, Ohio.

Paul G. Blazer, president Ashland Oil & Refining Co., Ashland, Ky.

E. G. Seubert, president Standard Oil Co. (Indiana), 910 South Michigan Avenue, Chicago.

B. L. Majewski, vice president Deep Rock Oil Corp., 155 North Clark Street, Chicago.

PRODUCTION COMMITTEE

Mr. Donnell, chairman; Harold B. Fell, president Simpson-Fell Oil Co., Ardmore, Okla.; K. S. Adams, president Phillips Petroleum Co., Bartlesville, Okla.; L. P. McCollum, president Carter Oil Co., Tulsa; A. S. Ritchie, independent producer, Wichita, Kans.; Ralph Pryor, Pryor & Lockhart, Wichita, Kans.; Clarence T. Smith, petroleum counsel, Flora, Ill.; H. N. Pardee, manager Texas Co., Salem, Ill.; Howard Keck, vice president Superior Oil Co., Evansville, Ind.; H. M. McClure, independent producer, Alma, Mich.

REFINING COMMITTEE

Mr. Blazer, chairman; H. W. Camp, manager of refineries Cities Service Oil Co., Bartlesville, Okla.; Walter Miller, vice president of manufacturing Continental Oil Co., Ponca City, Okla.; R. R. Irwin, general manager of refineries Socony-Vacuum Oil Co., Inc., Federal Reserve Bank Building, Kansas City, Mo.; G. W. Hanneken, vice

(Continued on Page 30)

This Week...

LOADING THE FIRST 25 TANK CARS OF 1,400 THAT WILL BE USED REGULARLY IN TRANSPORTING CRUDE FROM LIMA, OHIO, TO THE STANDARD OIL CO. OF NEW JERSEY REFINERIES AT BAYONNE AND BAYWAY, N. J. . . . . .

Estimates for 1941 motor-fuel consumption, based on results of the first 6 months and predicated on the few static factors available, range from 645,000,000 to 660,000,000 bbl., about 9 to 12 per cent above last year.

●

Completion by December 31 is specified in contracts awarded for construction of Plantation Pipe Line Co.'s 800-mile products line from Baton Rouge, La., to Greensboro, N. C. Bids of contractors for laying the line totaled $3,500,000.

●

Capacity of a coastwise tanker which normally carried 124,000 bbl. has been raised to 130,000 bbl. by modification of the load-line restrictions, an increase of 5 per cent. New load lines have been assigned to 60 tankers and the Maritime Commission is working out cargo formulas for 200 others.

●

Nine pipe lines formerly in the Standard group moved 24,873,000 bbl. of crude in June, 2,023,000 bbl. more than in May and 3,126,000 bbl. more than in the same month last year.

●

Designation of staffs and selection of district offices is the next step anticipated in coordination of the petroleum industry.

●

Rumor has it that the Germans are moving pipe-line equipment and laying lines into Soviet Russia as fast as Nazi troops can advance toward the Caucasus.

●

Completion of 675 wells during the week ended July 12 was the highest total of the year, indicating sustained momentum of drilling activity.

●

Crude-oil production is hovering near the record peak. Last week's output was about 225,000 bbl. per day higher than at this time last year.

At least 50 more United States tankers have been earmarked for diversion to the British cause. Future assignments to British service will be in lots of 10 to 15 boats. Reaction is too violent for transfer in larger lots.

The 25 district and fundamental committee chairmen appointed to implement the defense coordination functions of the petroleum industry are to be called soon for a conference with Secretary Ickes and Ralph K. Davies, deputy.

●

Growing demand for natural gas in the eastern section of the country is again emphasized by proposal of Hope Natural Gas Co. to build a $25,000,000 line from Charleston, W. Va., to northern Louisiana fields.

●

The defense crude-oil-line route reported favored by Coordinator Ickes runs from East Texas to Wood River and Sandoval, Ill., north of Cincinnati, Ohio, and then follows the southern Pennsylvania lines to the eastern coast terminals.

●

Oil companies are applying for trainload rates for crude and products from the Middle West to the East Coast. Twenty-five cars were discharging oil this week at Bayonne, N. J., loaded at Lima, Ohio, where a large loading rack has been installed.

●

Out of the 205 oil men appointed to the various committees, California has 39 representatives to lead the states. Texas received 33 appointments.

Bureau of Standards Discounts Savings From Engine Tuning

WASHINGTON, D. C., July 14.—The voluntary plan for the conservation of petroleum products through the proper adjustment of automobiles and other internal-combustion engines to eliminate waste of gasoline and oil, proposed by Petroleum Coordinator Harold L. Ickes, may not be as effective as has been maintained by its proponents.

A series of cooperative tests being conducted by experts of the Bureau of Standards in conjunction with the American Automobile Association has demonstrated that while considerable quantities of gasoline can be saved by optimum engine performance, nothing like the estimated overall 20 per cent reduction in consumption of crude oil can be accomplished by these methods.

"While recognizing the need for conserving gasoline in the face of a threatened serious shortage of petroleum in the eastern part of the country and commending all serious efforts along that line," the bureau stated, "the experts are disposed to take a realistic view of the problem as a whole."

The bureau also exploded the suggested "gasolineless Sunday" idea as a means of making substantial savings of gasoline.

"In connection with suggestions that a ban be placed on Sunday driving," it reported, "statistics are said to show that probably 60 per cent of the week-end operation of automotive vehicles can properly be classified as business or necessary transportation."

It had been estimated by Mr. Ickes that the proper adjustment of motors, lower speeds, and other conservation devices which might be practiced by motorists would reduce consumption in the eastern states by 20 per cent or approximately 250,000,000 gal. a month.

Meanwhile, the U. S. Park Police reported to Mr. Ickes that during the first 3 days of the model conservation program being tried out in the District of Columbia, some 42 motorists have been directed to report to the motor-vehicle-inspection station for the examination of their vehicles.

Mr. Ickes last week transmitted a copy of the District of Columbia model program to the governors of 16 Atlantic Coast states, together with a request that the state executives "lead, each in his own state, a voluntary effort having as its aim a reduction in the consumption of petroleum products by at least 20 per cent."

The program is now being tried out in the District of Columbia.

Propose New Route for Crude Line to East Coast Area

By J. P. O'DONNELL

NEW YORK, July 15.—Seven major oil companies with refineries and extensive marketing facilities in the East have virtually reached agreement for construction of a crude-oil pipe line from the Southwest to the East Coast, it is reported. These companies, the reports state, are Atlantic Refining Co., Cities Service Oil Co., Consolidated Oil Co., Tide Water Associated Oil Co., Socony-Vacuum Oil Co., Inc., Standard Oil Co. of New Jersey, and Sun Oil Co.

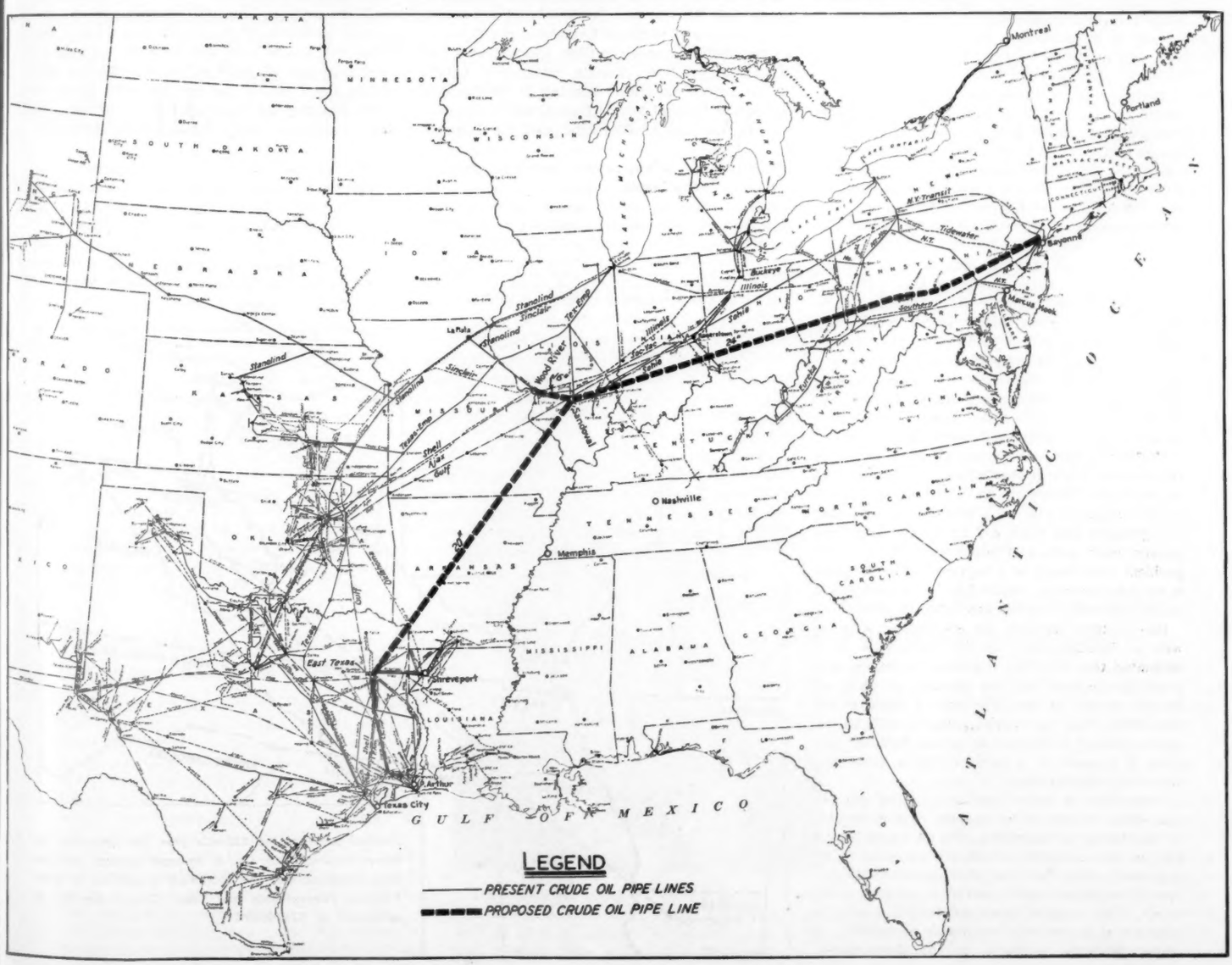
The line, mentioned as a probability in the July 10 issue of The Oil and Gas Journal, will originate in East Texas. A 20-in. line will carry crude from that field to a point in southwestern Illinois, in the vicinity of Sandoval and Junction City, where it will be joined by 16-in. line from Wood River, Ill. From that point a 24-in. line will carry oil to eastern refining districts. The 24-in. line will cross Ohio, north of Cincinnati, to escape unnecessary crossings of the Ohio River, to West Virginia and then follow rights-of-way of Eureka and Southern systems probably to Millway in southern Pennsylvania.

Segments of Varied Length

A direct line from East Texas to the probable junction in Illinois would be 525 miles long, while the 16-in. line from Wood River would be approximately 55 miles. The 24-in. line, if the eastern terminus is Millway, would be 700 miles long while branches to the Philadelphia-Marcus Hook area and to the Bayonne-Bayway area would be approximately 50 and 125 miles long, respectively.

Additional flexibility is regarded as the reason for inclusion of the 16-in. line from Wood River. As originally proposed, the Southwest-East Coast line would have drawn on East Texas exclusively whereas under the proposed plan deliveries from Kansas, Oklahoma, Central and West Texas through existing Sinclair, Ajax and Shell lines

New defense-crude-line route provides link with more numerous fields in Middle West, Southwest and West



will be possible. These lines converge at Wood River.

The plan was among 10 submitted to the petroleum administrator's office at request of Ralph K. Davies, deputy administrator. Complete details were not worked out, but it is pointed out there is no immediate necessity since construction must await final passage of Cole pipe-line bill. Among points yet to be decided is the method of delivery. While it is generally believed that the 24-in. line will terminate at Millway, with branches southeast to the Philadelphia-Marcus Hook area and northwest to the New York refining district, it has also been proposed that the 24-in. line be continued to the Pennsylvania region and a smaller line be constructed to the Bayway-Bayonne district.

Allotment of Ownership

It is expected that the proposed capacity of the line will be divided so that an average of 75,000 bbl. per day will be delivered to the New York district and 175,000 bbl. to the Philadelphia district. Allotment of crude will determine the proportionate ownership of the line. The line would be classified as defense project, thereby enabling operators to amortize it over a period of 5 years on a basis similar to that under which private industry built plants for the manufacture of tanks, planes, etc. It is understood that each participating company is to guarantee that it will take a certain proportion of the capacity for a period of 5 years, and that its interest in the line will be in the ratio of its proportion to the whole.

Refineries in the area that would be served directly by line and their capacities are: Atlantic, Philadelphia, 90,000 bbl.; Cities Service, Pettys Island and Linden, 32,000 bbl.; Consolidated, Marcus Hook, 45,000 bbl.; Socony-Vacuum, Paulsboro, 25,200 bbl.; Sun, Marcus Hook, 90,000 bbl.; Standard (New Jersey), Bayway, 124,000 bbl.; Tide Water Associated, Bayonne, 57,000 bbl.; total, 463,200 bbl.

It is expected that construction on the line will begin soon after passage of Cole bill. It is estimated that a minimum of 12 months will be required to complete and it is for this reason, among others, that it is being given prior consideration to proposed industry tanker building program. However, unanimity of opinion backing latter makes its undertaking almost certain, particularly if approval of Maritime Commission is forthcoming and necessary priorities are assured.

Under the tanker program 12 ways would be constructed. Their probable location has not been decided upon but proximity to a steel center such as Birmingham, Ala., is a desired characteristic. It is possible that ways will be divided into three groups, each with a different location. A fourth problem that looms as a barrier to this program is securing adequate skilled labor. Tankers would be in 15,000 to 18,000-deadweight-ton class.

Due to time required for erection of ways as well as building the tankers themselves, it is estimated that it would require a minimum of 3 years to replace tankers already diverted to British shuttle service. In addition there is the probability that additional tankers will be required, so that while need for tanker building program is apparent it is obvious that it would not meet the present crisis.

Probability of British securing more tankers was given substance by reports that a request for another 14 is impending. The 14 would be the first of the second 50 which are expected to be requested over the next few months, though the oil companies have received no official notification. The request from the United States is regarded as a step in a world-wide reshuffling of tanker facilities available to the democracies. These include the fleets of Great Britain, United States, Norway and the Netherlands, aggregating 75 per cent of the world total.

The reshuffling is planned so as to distribute the resultant shortage throughout the world and to make a maximum supply of oil available to all countries with the facilities remaining after British military needs are meet. It entails a vast rearrangement of routes and it is expected that some, possibly 17, of the reported 50 Norwegian tankers now operating in South American trade will be transferred to trans-Atlantic service. Depriving South American countries of service of these vessels would be a severe blow to Brazil, Argentine, Chile, and other importing nations, as well as to oil-producing and exporting countries, Venezuela, Colombia, and Peru.

The tanker-construction program is favored by the fact that after the war is over, there will be a widespread need for tank ships, whereas operation of the pipe line may prove uneconomic. Current shortage in tankers is world-wide and promises to become increasingly severe. Evidence of severity of the shortage is contained in the authoritative report made recently that 20 per cent of Norwegian fleet has been destroyed and an additional 20 per cent has been damaged. Today that estimate is described as conservative.

A number of war-damaged tankers are being repaired here now. While this is placing an additional burden on shipyards, it is reported that it has not been sufficiently severe to cause any major dislocation of the domestic tanker-building program.

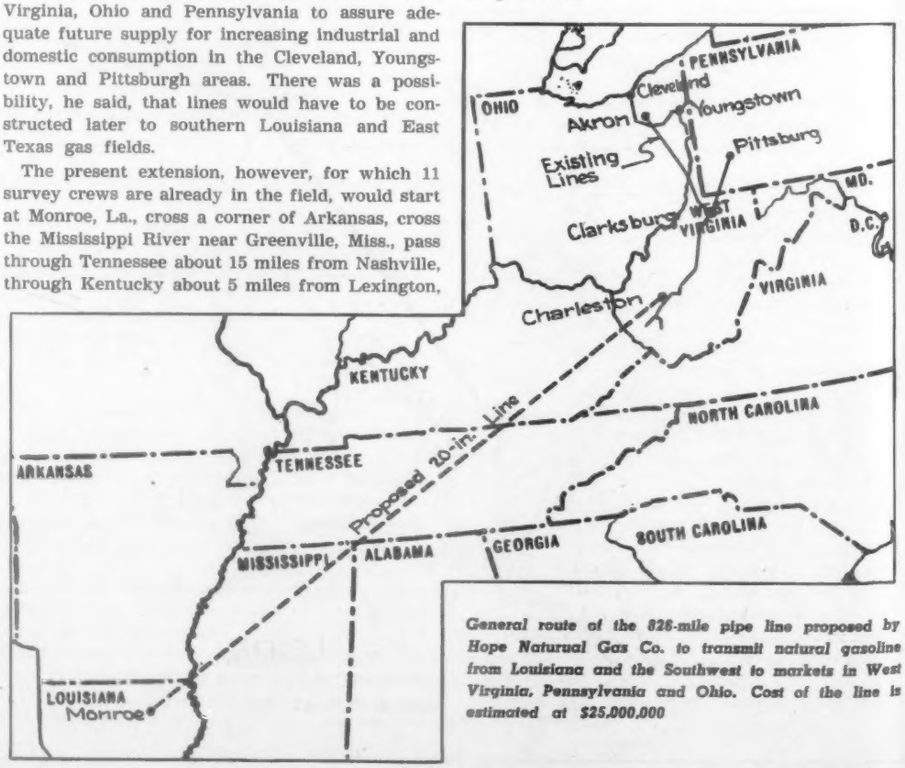
Hope Natural Gas Proposes 826-Mile Line to Louisiana

CONFIRMED last week by Loring L. Tonkin, president of Hope Natural Gas Co., were reports that the company would build a natural-gas pipe line to connect Louisiana gas fields to its distributing systems in Ohio, Pennsylvania and West Virginia. Mr. Tonkin announced details of the new project at a hearing in Washington before the Federal Power Commission on a petition by the city of Cleveland and the Pennsylvania Public Utilities Commission seeking a reduction in natural-gas rates to retail affiliates in Ohio and Pennsylvania.

Cost of the new line, to stretch 826 miles from the heart of the northern Louisiana gas fields to the Cornwell station 20 miles north of Charleston, N. C., was estimated by Mr. Tonkin at $25,000,000. It was made necessary, he indicated, by the inability of the company's 3,500 gas wells in West Virginia, Ohio and Pennsylvania to assure adequate future supply for increasing industrial and domestic consumption in the Cleveland, Youngstown and Pittsburgh areas. There was a possibility, he said, that lines would have to be constructed later to southern Louisiana and East Texas gas fields.

The present extension, however, for which 11 survey crews are already in the field, would start at Monroe, La., cross a corner of Arkansas, cross the Mississippi River near Greenville, Miss., pass through Tennessee about 15 miles from Nashville, through Kentucky about 5 miles from Lexington, through West Virginia about 5 miles south of Huntington and on to the Cornwell station. It would be a 20-in. line with compressor stations built at intervals of about 150 miles along the route and would turn gas into the company's present system of 4,400 miles of gathering and distributing lines in the northeastern states. It would also require construction of a dehydration plant and a parallel company-owned telephone line.

Hope Natural Gas Co. is a subsidiary of the Standard Oil Co. of New Jersey and is affiliated with the East Ohio Gas Co., a distributing company. Its general superintendent is Charles C. Reed. L. G. Kincheloe is superintendent of the pipe-line department. Recently the company moved its headquarters from Pittsburgh to Clarksburg, W. Va.



General route of the 826-mile pipe line proposed by Hope Natural Gas Co. to transmit natural gasoline from Louisiana and the Southwest to markets in West Virginia, Pennsylvania and Ohio. Cost of the line is estimated at $25,000,000

Watching WASHINGTON

By HENRY D. RALPH

Transfer of More Tankers Reported Imminent . . .

Immunity From Antitrust Laws Is Sought . . .

Coordinator to Call Conference Soon . . .

WASHINGTON, D. C., July 14.—Transfer of additional tankers to the British service, further complicating the supply situation of the eastern seaboard, is imminent, it was reported here today.

At the same time, it was learned that a new gigantic tanker-building program is under consideration and is expected to be announced shortly.

While government officials refused to either confirm or deny that the British Government has requested additional tankers, it was readily admitted in the office of Petroleum Coordinator Ickes that all oil-transportation planning is being based upon the probability that there will be an additional diversion of tankers to the British service "sooner or later."

It was pointed out that any official British request for additional tanker tonnage would be directed either to President Roosevelt or to Lease-Lend Administrator Harry Hopkins, and that any announcement concerning such a request would have to come directly from the White House.

The new tanker-construction program, said to involve approximately $100,000,000, has been approved by the Maritime Commission, with the proviso that the new ships be built in yards not now engaged in construction for the defense program and that there be no diversion of labor from current construction projects. As practically every shipyard in the United States is now engaged in capacity operations in connection with the defense effort, this is taken to mean that tankers built under the proposed program will have to await the construction of new shipyards and ways and the training of new supplies of labor.

Tanker Operators Hasten Use of New Load-Line Law

OPERATORS of the tanker fleet now engaged in the Gulf to East Coast trade have already made application for the issuance of certificates permitting them to carry heavier loads.

The amended load-line regulations became effective July 5 and on July 8 the tanker Magnolia sailed from Beaumont, Tex., for Portland, Me., with a new load line increasing its carrying capacity from 124,000 bbl. to 130,000 bbl., a gain of almost 5 per cent. The Magnolia, a medium-sized tanker of approximately 9,500 gross tons, was the first to sail under the amended act.

In assigning new load lines, the Bureau of Marine Inspection and Navigation works through the American Bureau of Shipping and Lloyd's. The bureau advised the department early last week that new load lines for 70 tankers were already prepared for distribution to operators and that more than 200 applications for new load lines had been received.

Bill Would Encourage Oil Industry in Defense Work

THE House judiciary committee is preparing to hold hearings on a bill (H.R. 5197), introduced by Rep. John M. Houston of Kansas, which would completely exempt oil companies cooperating with the federal Government from prosecution under the antitrust laws for acts taken in compliance with requests of the defense petroleum coordinator.

This measure would enact into law promises made by former Atty. Gen. Robert Jackson and Solicitor Gen. Francis Biddle that the Justice Department would consult with Mr. Ickes both on antitrust actions now pending and on any future possible actions before making any attempt to prosecute oil companies which are cooperating with the defense petroleum coordinator's office.

The bill is also designed to offset attempts by members of Congress to remove Deputy Administrator Ralph K. Davies from his post. Bills were introduced simultaneously in the House and Senate shortly after the announcement of Mr. Davies' appointment by Sen. Guy M. Gillette of Iowa and Rep. Robert F. Jones of Ohio, which would prohibit the employment of any person by an agency of the federal Government if he or his company has been found guilty of violating the antitrust laws relating to the duties of the governmental office he holds.

While it is expected that the Houston bill will receive the serious consideration of the Congress, the proponents of the Gillette-Jones measure have indicated that an attempt will be made to amend the bill in a manner which would bar the employment of any person who has been convicted or has pleaded nolo contendere, or has had a judgment or a decree entered against him, from the federal pay roll.

Chances for enactment of the Houston bill are believed to be excellent because of the new era of cooperation between government and industry which has been ushered in through the operation of the defense program. In addition, the tendency has been to place experienced business men in key positions in the various defense agencies in an effort to obtain the fullest possible measure of cooperation.

Enactment of this law may foreshadow similar legislation with respect to other large industries such as steel, automobiles, and other businesses which have been the subject of antitrust actions in the past.

CONSULTANT ON FUEL . . .

J. Elmer Thomas, petroleum analyst of Fort Worth, Tex., is now in Washington, D. C., to accept appointment as advisory consultant to the fuel section of the price division, Office of Production Management

Chairmen May Be Soon Called For Washington Conference

A CONFERENCE with chairmen of the district committees appointed Saturday to advise and consult with the petroleum coordinator is expected to be scheduled shortly in order to more fully acquaint them with exactly what will be expected of them.

In announcing the appointments, Mr. Ickes told the members of the various committees that in addition to serving in a purely advisory capacity, they would be called upon to assist in the performance of any orders or recommendations which he might issue. This development came as a surprise as it had been stated previously that the industry groups would be solely advisory and would not be permitted to take any administrative action.

Stratigraphic Traps Renew Interest in Western Kansas

WICHITA, Kans., July 15.—Discovery of a new Viola lime pool under stratigraphic-trap conditions in a wildcat test in western Reno County, Kansas, carries considerable significance in future exploration flanking the Central Kansas uplift.

The regional position of this wildcat on the Zenith-Stafford trend fringing the southeast flank of the uplift is pointed out by Kansas geologists who have made detailed studies of the region. Additional production possibilities exist along the east and southeast flank of the geologic feature extending as far as Geneseo townsite, 80 miles north, measured on the periphery of the uplift. The Wellman (Misener sand) gas pool of southwest Rice County emphasizes the area.

Reflection seismograph, which was responsible for the discovery of two stratigraphic traps on this regional edge line—Zenith and Stafford—will continue to play an important part in this revived exploration trend.

Most Recent Discovery

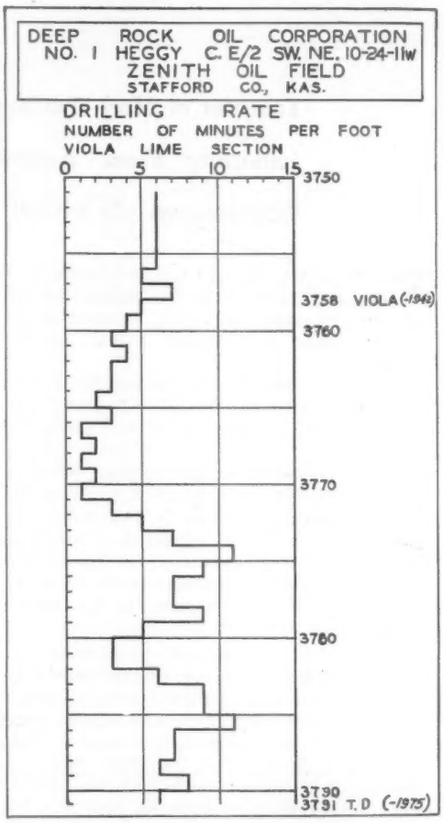
Most recent discovery to bring the trend into field interest is Simpson Oil Co. 1 Snowbarger, in the SW SE NE 21-23n-10w, 5 miles north of the town of Sylvia. The wildcat based the Pennsylvanian system at 3,595 ft., topped a thin section of Mississippian chat at 3,620 ft. with a showing of oil, topped "Misener" sand (represented by only 6 in. of detrital material) at 3,772½ ft., topped Viola lime at 3,773 ft. (1,992 ft. subsea) with a showing of oil logged in penetration of 1 ft. Crews ran core barrel and cut cores from 3,774 to 3,787 ft., total depth. Casing was set at 3,773 ft. and when the plug was drilled early this week the well cleaned itself of 1,000 ft. of water load and oil rose to the top of the hole.

Structural position of the Viola lime in the Snowbarger test, topped at —1,992 ft., and penetrated to —2,006 ft., is comparable to producing levels in the Viola lime zone of the Zenith pool, 6 miles to the southwest. There, the producing relief in the Viola ranges from 150 to 160 ft.; the highest producing contour is —1,871 ft., logged in the C S½ SW NE 2-24s-11w, while the water level at Zenith is variously estimated at —2,020 to —2,030 ft.

Structure of the Viola lime in the Zenith field is a south plunging terrace, the truncated, beveled surface exposing lower members northward. Oil accmulation is at the unconformity in the top of the formation.

The upper zone of the Viola at Zenith is Fernvale in age and consists of pink, white crystalline dolomite. It is 6 ft. thick in the north end of the Zenith area, where it is underlain by the Trenton-Galena zone, recognized in samples as coarse, crystalline limestone.

Top of the Viola is marked by an unconformity; olive green to red Kinderhook shales of lower Mississippian age overlie it in the north end of the field, while Misener sands and intercalated limestones overlie the formation southeastward.



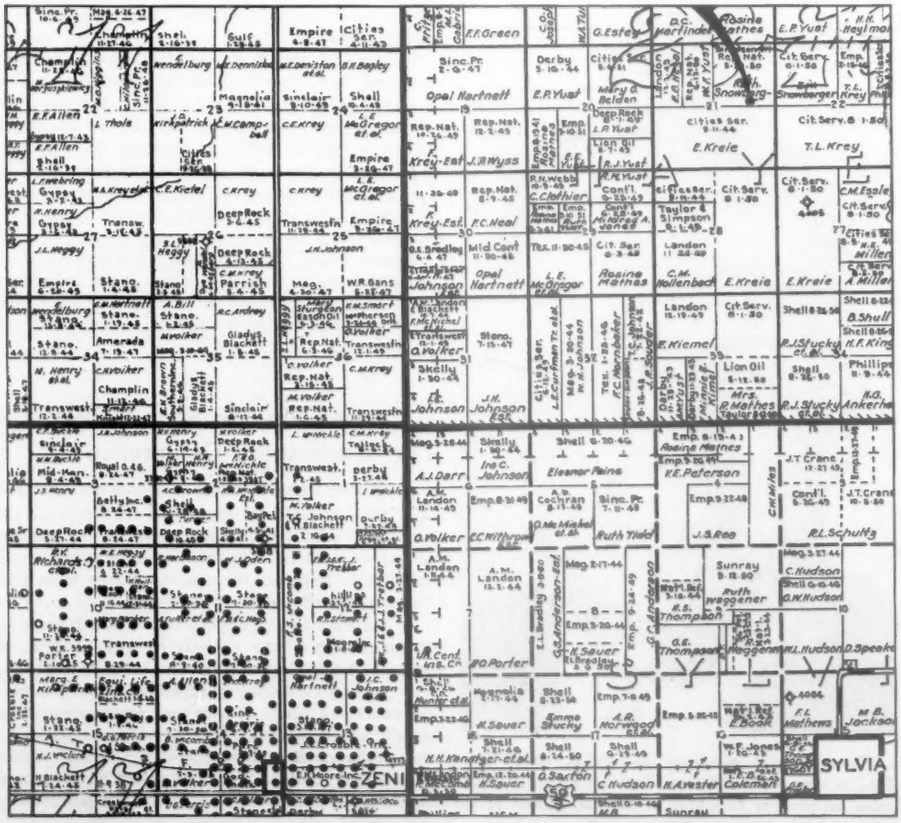
Right: Rate of penetration chart showing drilling characteristics of the Viola lime in the north end of the Zenith field in Stafford County, Kansas

Record of Zenith Field

The Zenith field has produced since its discovery in September 1937, a total of 4,609,090 bbl. of 40° gravity oil. Present daily average production for the field is 7,916 bbl.

Of the 258 oil wells on production in the field at present, approximately 130, or roughly half of the field total, are completed in the Viola lime at an average depth of 3,800 ft.

More than 3,480 acres have been developed to date in this formation, extending approximately 2½ miles from north to south and 3½ miles from east to west. The formation dips into water on the south side of the structure, just north of the



Courtesy Kansas Blue Print Co., Wichita, Kans.

Left: Production map showing the Zenith field of Stafford and Reno counties. The arrow indicates the location of Simpson Oil Co. 1 Snowbarger, which cored oil saturation during the week from Viola limestone at 3,773-87 ft. A new pool on a stratigraphic trap is indicated

SUMMARY OF PRODUCTION DEVELOPMENT: VIOLA LIME

Pool—	County	Location	Discovery date	Data method	Oil wells (Viola)	Gas wells	Cumulative production*	Proven acreage	Pay depth
Aetna	Barber	13-34-15w	7/35	.....	..	1	.....	40	5,215
Lake City	Barber	7-31-13w	6/37	Surface	1	..	15,000	80	4,433
Medicine Lodge	Barber	15-33-15w	3/37	.....	2	..	28,929	160	4,847
Morrison	Clark	17-32-21w	11/36	.....	2	..	28,560	160	6,477
Ritz-Canton	McPherson	19-20; 1-2w	6/29	.....	..	..	.....	....	3,412
Voshell	McPherson	20-21-3w	8/29	.....	..	..	.....	....	3,301
Lindsborg	McPherson	8-17-3w	1/38	Seismograph	2	..	17,732	160	3,350
Cunningham	Pratt, Kingman	27, 28-10, 11w	1934	Core drill	..	..	.....	6,400	3,922
Griffith	Reno	26-4w	5/27	.....	..	..	.....	....	4,123
Hilger	Reno	26-4w	3/34	Seismograph†	33	..	1,509,459	600	4,060
Buhler	Reno	22-5w	3/38	Subsurface	1	..	.....	....	3,890
Lerado	Reno	26-9w	12/35	Core drill	32	..	1,825,670	1,800	4,156
Cheney‡	Sedgwick	8-27-1w	11/35	.....	1	..	.....	....	4,020
Curry‡	Sedgwick	27-1w	10/29	.....	1	..	.....	....	3,390
Eastborough	Sedgwick	27, 1-2e		.....	..	..	.....	....	3,238
Eastborough, N.	Sedgwick	26-2e	8/38	.....	2	..	3,881	80	3,258
Greenwich	Sedgwick	26-2e	5/29	.....	..	..	.....	....	3,321
Schulte‡	Sedgwick	28s-1w	3/34	.....	1	..	.....	10	....
Valley Center	Sedgwick	25, 26-1w	8/28	Core drill	..	..	.....	....	3,360
Neola‡	Stafford	25-11w	3/34	.....	..	..	.....	10	3,920
Zenith	Stafford	24-11w	3/39	Seismograph	20V.	..	§4,609,090	....	3,800
Stafford	Stafford	15-24-12w	8/40	Seismograph	1	..	§59,840	....	3,815
.....	Saline	10-16-3w	12/29	.....	..	..	.....	....	3,302

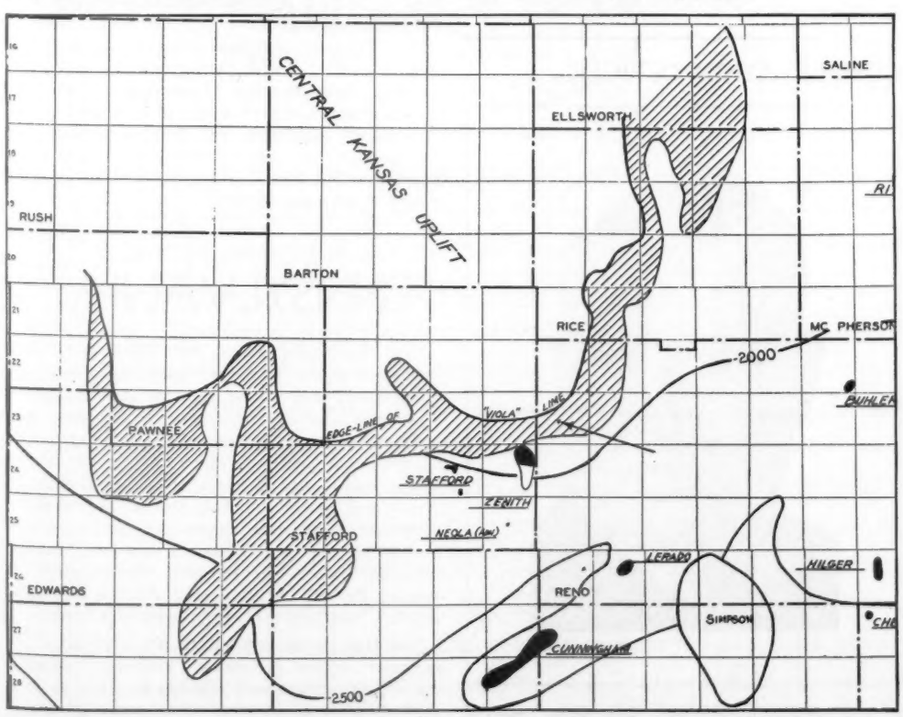
*Production to Jan. 1, 1940. †First seismograph discovery in Kansas. ‡Abandoned area. §Production to June 1, 1941.

Zenith townsite. Viola producing acreage comprises portions of Sections 1, 2, 3, 10, 11, 12, 14, 15, 16, and 22, in Stafford County and two wells in the SW SW 7-24-10w eastward in Reno County.

Viola lime production at Stafford pool, 4 miles west of the Zenith structure, is confined at present to seven wells which have proved approximately 150 acres. One well produces from the deeper Arbuckle dolomite.

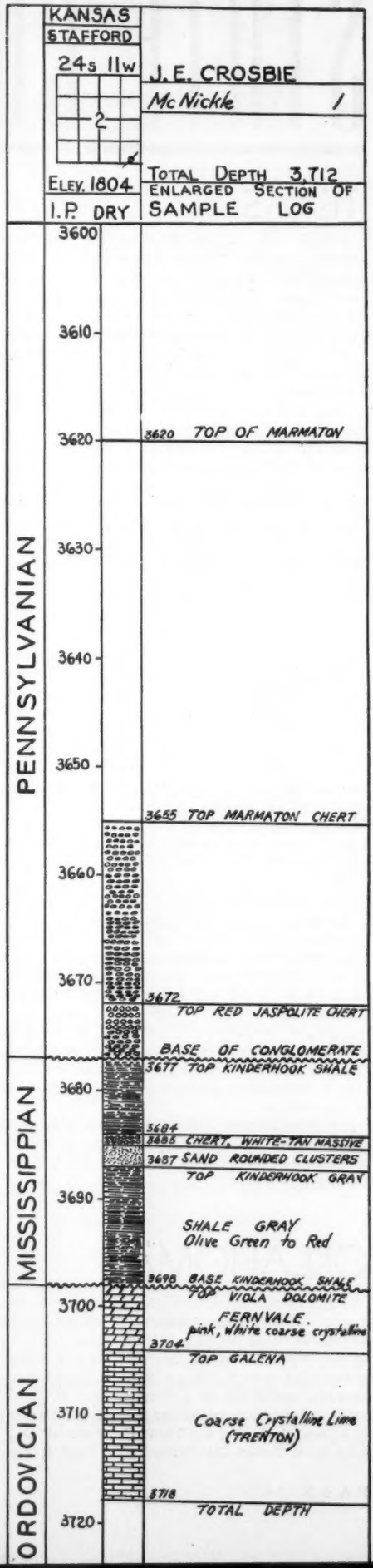
Wells completed in the Zenith area are drilled to the top of the unconformity with rotary tools. Casing is set on top of the Viola lime and rotary tools moved off. Standard rig is installed for completion and the well finished with some type of cleaning-out unit. Cable-tool core barrel is used to penetrate the formations below the unconformity. Rate-of-penetration data are found helpful in determining proper completion depth.

In subsurface studies of the Zenith-Stafford trend in search of stratigraphic traps, particular attention will be given to structural terraces of the Wherry, Barnholdt or Zenith type, exhibiting little or no closure on structural features dipping away from the east or southeast flank of the Central Kansas uplift. Core-drill data may be helpful in determining the attitude of the Fort Riley limestone encountered at a depth of approximately 1,715 ft. in the Snowbarger test.



Paleogeographic map of the southeast flank of the Central Kansas uplift showing the edge line of the Viola lime and production development to date from that formation under stratigraphic trap conditions. Other fields producing from the Viola are underlined

Below: Type sample log of the Lower Paleozoic strata in the north end of the Zenith field illustrating unconformities and stratigraphic succession



STATE CAPITALS...

TEXAS

TEXAS' OIL ALLOWABLE last Saturday was reported by the Railroad Commission to have climbed 5,515 bbl. to 1,353,242 bbl. daily following the cutback of 85,809 bbl. from peak June production. This placed the allowable production at 18,121 bbl. daily under the Bureau of Mines figure of 1,324,000 bbl. during July, after subtracting 47,363 bbl. (3.5 per cent) for underproduction of allowables. A total of 97,320 wells were reported on the proration schedules, 161 more than the previous week.

West Texas saw the heaviest increase in allowables when it gained 2,360 bbl. daily for a total of 230,508 bbl. Gulf Coast Texas, with 248,406 bbl., had allowables of 1,432 bbl. more than last week. The rest of the state-wide gain in allowables was split up. Southwest Texas, 220,148 bbl., up 636 bbl.; East Central Texas, 84,409 bbl., up 371 bbl.; East Texas, 334,260 bbl., same; West Central Texas, 45,836 bbl., up 329; North Texas, 112,780 bbl., up 341; Panhandle, 76,895 bbl., up 46 bbl.

At the state-wide hearing to be held in Austin on Wednesday, much of the discussion is expected to center around the East Texas field and action that the commission might take to arrest the decline in bottom-hole pressures. Recent tests revealed that pressures have dropped to around 1,035 lb., whereas testimony presented at past hearings placed 1,020 lb. as the pressure at which installation of pumping equipment was advisable. Possibility of an extended shutdown, to allow formation pressures to build up, was discussed by some operators.

A JUDGMENT OF $906,138 against Humble Oil & Refining Co. was entered at Austin, Tex., July 8 in the state's attempt to collect chain-store taxes from service stations. The company gave notice of exception and appeal from the decision handed down by District Judge J. Harris Gardner.

Exemption from the chain-store taxes was claimed by the company's attorneys on grounds that their 280 service stations sold only petroleum products and service. The state contended that sales of tires and accessories were not service but merchandising.

The chain-store tax law was amended by the recent session of the legislature exempting service stations if 75 per cent of their business was in petroleum products.

OKLAHOMA

THE STATE CORPORATION COMMISSION on Monday ordered a top allowable of 75 bbl. daily for the new West Bethel pool of Seminole County, but hearing on an application for 20-acre spacing in the field was continued until July 28. The allowable ruling was on application of C. C. Cummings. Twenty-acre triangular spacing was sought by a group including the Texas Co., Pure Oil Co., Deep Rock, Sunset Oil, Philip Taber, Paul J. McIntyre, Alice M. McIntyre, H. J. Sherman, Russell Tarr, Irene M. Tarr and Mr. Cummings.

The spacing order would cover all of Section 14 and the south 60 acres of W½ NW of 13-9n-7e, about 700 acres. Cummings et al opened the area in March this year with a well in SW SE NE of 14-9n-7e, which had pay at 3,450-51 ft., and tested 600 bbl. of oil, 800 bbl. of water and 2 million cubic feet of gas a day.

KANSAS

THE KANSAS CORPORATION COMMISSION has announced that the market-demand hearing for August would be held in Wichita at 2 p.m. on July 24. No great change is anticipated in purchasers' nominations. The state's current allowable is 237,400 bbl. daily, or 12,100 bbl. over the Bureau of Mines recommended figure of 225,300 bbl. In the morning the commission will hear application of the Phil-Han Oil Co. and associates to obtain a development order for the E½ NW SW NW 10-15s-12w, in Russell County; of R. H. Shield and Allan McGuire for Sections 1, 2, 11, and 12 of 8s-24w in Graham County; and of Luthur Mackall to develop N½ SW 27-15s-12w and NW 34-15s-12w in Russell County.

POTENTIAL PRODUCTION of the 21,268 oil wells listed by the Corporation Commission at the start of July totaled 7,696,581 bbl. daily according to the regulatory board's records. Production from 6,650 oil wells is under rules and regulations of the commission and they have 7,643,076 bbl. of the potential accepted by the board. Unprorated wells totaling 14,618 have a potential of 53,515 bbl. daily, which is the allowable for this type of producers during July. Prorated wells have an allowable of 183,885 bbl. daily.

ALLEGED ILLEGAL CRUDE-OIL TRAFFIC from producing fields to refineries, involving violations of the Corporation Commission's proration orders and possibly the Connally Act is to be investigated. Andrew F. Schoeppel, chairman of the commission, announced last week that R. C. Woodward, El Dorado, Kans., attorney and a member of the house, has been appointed special investigator.

J. G. Somers of Newton, Kans., former district judge, is to assist Mr. Woodward in the investigation. He is now a special assistant state attorney general with the assignment of checking law infractions in connection with transporting, refining and marketing of oil.

CONSERVATION OFFICER . . .

J. J. O'LOUGHLIN, Oklahoma City, Okla., received formal appointment to the post of conservation officer for the Oklahoma Corporation Commission, effective July 1. He had been acting conservation officer for several months

CALIFORNIA

CRUDE-OIL PRODUCTION in California, despite a concerted attempt to secure more effective curtailment, is running higher this month although the change as compared with June is nominal. Excess production for the month to date is approximately 40,000 bbl. per day although some of this reflected the production formula in effect at the Lake View section of the Midway-Sunset field of Kern County where the entire monthly allotment is withdrawn during the first 15 days of each month. It is likely that production will be substantially reduced late in the month as some other fields follow a procedure somewhat similar to that in Midway-Sunset.

Still, production is materially above expectations of the Conservation Committee. Independent producers are reluctant to cut crude withdrawals as long as major companies exceed their respective allowables.

The California administrator has warned producers of the probable consequences and there is nothing more that the Conservation Committee can do about it. There seems to be a feeling that compulsory regulation will become a reality in the near future and producers are getting as much crude oil out of the ground as possible before it becomes effective.

PENNSYLVANIA

THE CONSERVATION MEASURE permitting Pennsylvania to join the Interstate Commerce Commission was passed by the state house of representatives last Saturday and has been sent to Gov. Arthur H. James for his signature. The bill previously had been given unanimous passage in the senate. Introduced by Senators Thomas B. Wilson and Leroy Chapman, the bill describes its purpose "to conserve oil and gas by the prevention of physical waste thereof from any cause." Governor James has signified his intention of signing the bill as soon as it reaches his desk, which it was expected to do early this week.

The New York Legislature has also given its governor, Alfred H. Lehman, authority to sign a bill admitting that state into the compact as soon as Pennsylvania entered. Oklahoma's governor, Leon C. Phillips, Interstate Compact Commission chairman, said that he had received a message from Albany, N. Y., stating that Governor Lehman was ready to sign the bill admitting New York.

The OIL AND GAS JOURNAL

PRODUCING REFINING NATURAL GASOLINE PIPE LINE

Published weekly by The Petroleum Publishing Company at Tulsa, Oklahoma

Anticipating Trouble

Major responsibilities, both to the nation and to the petroleum industry, rest on the shoulders of the 205 leaders who were appointed by Secretary Ickes "to advise and consult with me and with the deputy coordinator on matters relating to the proper coordination of the activities of the petroleum industry for national defense."

The establishment of district offices and the appointment of staff personnel will be a final step in perfecting the organization of government and industry to which the military and millions of civilians will look to the solution of many problems which center in oil supplies.

The danger in large committees is that duties are widely divided and too often the art of buck-passing develops to the point where little or nothing is accomplished. Sometimes that is the objective of the appointer.

In this instance there is plenty for every member of each committee to do to the end that Washington immediately will start having the benefits of their combined knowledge of the oil business. Lack of prompt action is certain to come back to the industry in the form of protracted problems which will continue long after this emergency is over.

Chairmen of the five districts will need to familiarize themselves with the Government's program, several phases of which are either in the making or have not been fully explained. Obviously, the committees' membership, scattered throughout the country, cannot take the lead in coordinating the industry's operations until they know what is wanted now and later.

In this connection, reports persist that the Government will requisition an additional 50 tankers from coastwise service before the end of the year. The committees have the right to know the why of this program before it gets under way. There is reason to believe that the industry will be able to offset the effects of the first reduction in its tanker transportation facilities but there are serious implications to operators and their customers in additional raids on the industry's transportation.

Unless the situation is fully understood by everyone concerned, and acted upon, the matter of adequate supplies and equipment to maintain the necessary level of domestic operations will shortly become the most important problem confronting the industry.

It is here that the membership of the district committees can be particularly helpful. They know the business from the field to the service station and know what it takes in materials to assure this country and its defenses hundreds of products at low prices. They, better than anyone else, realize that past records of accomplishment cannot be continued if shortages of essential supplies continue over any length of time.

This is a matter which requires special study. Drilling, pipe line and refinery-construction contractors and others who serve the industry and who are closer in touch with many phases of this situation than are the operators themselves should be consulted.

There are cases now in which these drilling and construction firms are unable to maintain normal services because they lack machinery parts and other small supplies. No one will deny that these conditions cannot be permitted to continue in any program which aims to assure the large scale production of a natural resource and which will play such an essential part in the industrial and military defenses.

There are other pending matters which should receive the consideration of the industry's committees. They can await the costly delays of governmental inaction or they can be handled in a manner representative of any industry which has solved most of its problems by anticipating them.

Senate Passes Cole Bill; Sends It to Conference

WASHINGTON, D. C., July 15.—The Cole pipeline bill, designed to facilitate the construction of petroleum pipe lines to counteract the imminent shortage of petroleum and petroleum products on the eastern seaboard resulting from the recent transfer of 50 United States tankers to the British service, was passed today by the Senate.

While the measure has already received House approval, an amendment adopted by the Senate will necessitate the sending of the vitally needed legislation to conference. The amendment, proposed by Senator Barkley, majority leader, provides that all authority granted the president to suspend any provisions of the Interstate Commerce Act, including all acts mandatory thereof or supplemental thereto of the Natural Gas Act, with respect to any pipe line built under the Cole bill, shall expire June 30, 1943. The amendment had been requested by Joseph B. Eastman, chairman of the Interstate Commerce Committee.

Rep. William P. Cole, Jr., of Maryland, author of the bill, is strongly opposed to the amendment and has indicated that when the bill is sent to conference he will insist that the conferees agree on the House version. Mr. Cole stated that inclusion of the Barkley amendment would have "a very damaging effect upon the bill."

Enactment of the bill into law with this amendment, Mr. Cole explained, would mean that the only way pipe lines could be built would be for the Government to build them.

"I can't conceive of private capital taking the risk of constructing these lines if it is known that they can't operate them after 1943," he said.

Mr. Cole added that there is a rapidly increasing need for the construction of the pipe lines in order to supply the East Coast with gasoline and fuel oil and other products.

●

A. V. Bourque Chosen Secretary Of Tank-Car Owners Committee

A. V. Bourque, formerly secretary of the Western Petroleum Refiners Association and also of the Natural Gasoline Association of America,

A. V. BOURQUE

Tulsa, has been chosen executive secretary of the newly formed committee of tank-car owners. The voluntary committee was formed last week in Chicago to obtain maximum utilization of present tank-car facilities, at which time Ralph Budd, commissioner of defense transportation, approved the committee's selection of Mr. Bourque.

His new duties will consist of keeping a minute check on every tank car so that they may be drafted to help serve any section of the country with products of oil or liquid foodstuffs should a shortage of supply develop that cannot be cared for by truck or ships. The tank-car owners committee of 15 is headed by J. S. Wood of Pan American Petroleum & Transport Co., New York.

DEATHS

WARD GUY, 54, employe in the production department of the Texas Co., at Oil City, Pa., died in a hospital July 7.

FLOYD CUMMINGS, 50 employe of Texola Drilling Co., died July 7 in Gladewater, Tex., from injuries sustained in a pump house on a lease in the East Texas field. He is survived by his widow and two children.

URBAN L. RIVES, 38, of Vivian, La., was killed in a drilling accident in Clarke County, Alabama, July 8. He is survived by the widow, two children, his parents and a sister.

ARTHUR DAVID CARSON, 64, an oil producer for several years in the Pleasantville, Pa., district, died at his home July 5. The widow, three brothers and a sister survive.

JEWELL COLLIE, 32, Henderson, Tex., a field worker in East Texas, was burned to death July 7 when a tank of oil on an adjoining site exploded and hurled flaming crude over the victim. Mr. Collie was erecting a tank when the accident occurred.

AUBREY BUTLER, 30, of Kingsville, Tex., and **JAMES CLINTON WATSON,** 29, of Woodsboro, Tex., were killed July 7 while working on a rotary rig in the La Gloria field, near Alice, Tex. They were fatally injured when a gas line exploded.

CLIFFORD B. HODGES, superintendent in the Rocky Mountain district for Halliburton Oil Well Cementing Co. and previously in the same capacity in the Houston, Tex., distrist, was killed near Craig, Colo., July 3, in an automobile-truck collision. Burial was in Forest Park Cemetery, Houston.

EDWARD M. JOLLEY, 36, one of the most widely known sales engineers of the Kansas, Missouri, Nebraska and Iowa area, succumbed to a heart attack the morning of July 3 while driving alone to Lawrence, Kans., on a business call for the Marley Co., cooling-tower manufacturers whom he has represented since the first of 1938, operating out of the main office in Kansas City, Kans. Born May 23, 1905, at Spearfish, S. D., he completed grade and high schools there, and was graduated in mechanical engineering in 1928 from the University of Nebraska. In December 1932 he married Katherine Hinckley of Pittsburgh, Pa. Mrs. Jolly and two daughters, aged 7 and 5, survive him.

●

California Price Advance Gains O.P.A.C.S. Sanction

WASHINGTON, D. C., July 15.—Price Administrator Leon Henderson this afternoon wired California producers that there would be no request for a reduction in crude prices at this time.

Mr. Henderson's decision was predicated upon the understanding that there will be no further increase in crude prices without a conference with the Office of Price Administration and Civilian Supply.

At the same time, Mr. Henderson revealed that he is communicating with refiners and marketers to request that there be no increase in the prices of refined products on the West Coast over current levels.

California operators had protested vigorously against enforcement of the original O.P.A.C.S. order issued June 7.

Plan Announced for Giving 1 Day's Output of Texas Oil to Britain

DALLAS, Tex.—John F. Camp, independent oil operator of San Antonio, Tex., advanced a plan here last Saturday for giving Great Britain the entire output of Texas' oil fields during one of the 11 July shutdown days ordered by the Railroad Commission. On the day designated by the commission, the 1,300,000-bbl. gift would be pumped into storage tanks, according to his plan, and warrants giving title to President Roosevelt would be issued. The British could pick up that amount of oil at any storage depot. The oil would then be replaced with that from the Texas reserve. Mr. Camp said he had already been pledged 75,000 bbl. of oil.

THE MARKETS*

CRUDE OIL: Scattered adjustments and local advances in the posted prices for crude oil serve to emphasize strength of this market and reflect the difficulty purchasers are having in maintaining their connections. Purchasers in the Panhandle have adjusted their postings to conform to the highest gravity table there and two raises of 5 cents each were made July 9 and 12 in the Falls City, Neb., field.

REFINERY PRODUCTS: Prices are strong and trending higher on most products throughout the country. Motor fuel is difficult to locate in the Mid-Continent and Gulf Coast markets where recent heavy withdrawals have diminished stocks available for spot trading. High-octane gasoline was advanced 0.25 cent per gallon on the Gulf Coast and distillate fuels were hard to locate. Refiners in most districts are running large portions of their gas-oil production to cracking furnaces to obtain maximum gasoline yield.

TANK WAGON AND POSTED DEALER: Downward adjustments to meet local conditions were reported from three Middle West cities. Otherwise the markets to or once removed from the consumer are relatively static. Influence of the Office of Price Administration and Civilian Supply is in evidence.

FINANCIAL: Oil securities rose to the highest average attained since the middle of January 1940. Average of 30 representative stocks for the week ended July 12: High, 26.80; low, 25.45; close, 26.56. Week ended July 5: High, 25.68; low, 24.77; close, 25.36.

*Detailed information in the Market Section.

Type G-MV . . .

With power cylinders in a vertical "V" and compressor cylinders horizontal, this 10-cylinder, 1,000-hp unit compresses gas in a Texas plant.

Compressor?

Which type of compressor equipment will best meet your requirements? Consider adaptability, optimum operation, flexibility, and operating and maintenance costs . . . all those points are important in your choice.

Type G-MV, the modern "V-angle" compressor, is for you who want rugged gas-engine-driven compressors that are extremely compact and flexible, easy to transport and install, require minimum foundation materials and housing space. Built in 4, 6, 8 and 10 cylinder units, they're rated 400 to 1,000 hp!

If you want the simplicity and dependability of "horizontals", there's a complete line of Cooper-Bessemer horizontal engine-driven compressors, ranging from 125 to 1,500 hp . . . and there are horizontal motor-driven units of up to 3,000 hp!

Cooper-Bessemer engine and motor-driven compressors serve many of the largest refineries, transmission stations and process plants in the oil and gas industry. The experience gained by our engineers in those installations is available to you without obligation. Let them help you select the right compressors for your plant.

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International

Venezuela . .

Production Is Highest Since Outbreak of War

DAILY average production of 599,335 bbl. was registered from Venezuelan fields in May, the highest rate of yield reported since outbreak of the war which closed European markets to South American petroleum. Daily production in May was about 7 per cent higher than reported for April, in which month production averaging 561,436 bbl. daily was the highest since the middle of last year.

Spread of exploration in the eastern part of Venezuela is reflected in May production figures which include higher output by some of the newer fields and contain one or two fields that have returned, or entered for the first time, the list of shipping areas. Fields in the Lake Maracaibo basin continue to supply a majority of Venezuelan crude-oil production. In May, Maracaibo fields produced 64 per cent of the nation's crude.

Territory about 30 miles east of the Oficina field, including Leona and El Tigre, is one of the most active sections of eastern Venezuela, outside of the more extensively developed fields where routine drilling operations are being maintained.

Los Ollas, a new field in the extreme eastern part of the State of Guarico and west of El Roble, returned to the list of shipping areas in May, accounting for total output of 2,185 bbl. in the month. Lagunillas' production of 5,762,300 bbl. in May, a daily average of 185,880 bbl., was more than 1,000,000 bbl. greater than the output in April.

Subsidiaries of Standard Oil Co. (New Jersey) produced a daily average of 309,596 bbl. of oil in May. Shell companies recovered 164,135 bbl. daily and Mene Grande (Gulf) produced 123,117 bbl. daily. Socony-Vacuum's Venezuelan production averaged 312 bbl. daily, Texas Co., 82 bbl. and Consolidated (Sinclair), 38 bbl. from its new discovery well in the Santa Barbara field.

Plans call for construction this year of an 8-in. pipe line from the Leona field to the Oficina trunk line and for the linking of other partially developed fields along the route of this transportation outlet.

Venezuelan petroleum exports in May totaled 15,677,260 bbl., an increase of more than 2,400,000 bbl. compared with April when shipments aggregated 13,296,975 bbl. Offshore movement of Venezuelan petroleum averaged 505,718 bbl. in May against 428,935 bbl. in April. Details of production by companies and fields along with origin and designation of exports during May are shown in the following tables:

VENEZUELAN CRUDE-OIL PRODUCTION

By Fields

	April	May
Cabimas	1,974,605	1,931,730
Lagunillas	4,680,985	5,762,300
Tia Juana	3,824,790	4,205,395
Bachaquero	21,360	22,745
Lake Total	*10,501,740*	*11,922,170*
La Concepcion	58,880	65,430
La Paz	34,565	34,910
Mene Grande	899,260	939,755
El Cubo	400,295	440,850
Cumarebo	153,920	173,395
Las Palmas	2,190	2,145
El Mene de Mauroa	17,690	18,395
Hombre Pintado	44,535	43,690
Mara district	1,885	1,540
Quiriquire	1,733,865	1,802,300
Pedernales	129,235	135,730
Temblador	278,470	288,015
Oficina	1,790,325	1,843,555
Jusepin	447,190	488,895
Santa Ana	10,600	22,735
San Joaquin	186,055	190,740
El Roble	114,610	117,210
Leona	1,140	9,570
Guario	8,980	9,660
Santa Rosa	22,550	21,280
Los Ollas	.....	2,185
Los Caritos	2,540	2,520
Santa Barbara	2,580	1,205
Tabasca	.....	1,520
Total	16,843,100	18,579,400

By Companies

Caribbean Petroleum Co.	899,260	939,755
Venezuelan Oil Concessions, Ltd.	3,266,285	3,707,630
Colon Development Co.	400,295	440,855
Lago Petroleum Co.	5,702,990	6,658,155
Mene Grande Oil Co.	3,739,340	3,816,655
British Controlled Oilfields, Ltd.	17,690	18,395
Central Area Exploitation Co.	44,535	43,690
Standard Oil Co. of Venezuela	2,738,550	2,921,645
Compania de Petroleo Lago	18,170	17,695
Socony-Vacuum Oil Co.	8,980	9,660
Texas Co. (Venezuela), Ltd.	2,540	2,520
Cia. Consolidada de Petroleo	2,580	1,205
Orinoco Oil Co.	1,885	1,540
Total	16,843,100	18,579,400

VENEZUELAN PETROLEUM EXPORTS, MAY 1941

From Maracaibo

	Destination	Bbls.
Caribbean Petroleum Co.	Curacao	108,700
Venezuelan Oil Concessions, Ltd.	Curacao	3,512,775
Venezuelan Oil Concessions, Ltd.	Aruba	54,585
Colon Development Co., Ltd.	Curacao	407,005
British Controlled Oilfields	Curacao	59,330
Lago Petroleum Corp.	Aruba	5,070,550
Lago Petroleum Corp.	Las Piedras	749,920
Mene Grande Oil Co.	Las Piedras	1,895,355
Mene Grande Oil Co.	Aruba	19,250
Standard Oil of Venezuela	Guiria	90,350
Standard Oil of Venezuela	Trinidad	41,105
Total from Maracaibo		12,008,925

From Maturin

Standard of Venezuela	Aruba	598,155
Standard of Venezuela	Guiria	156,265
Standard of Venezuela	E.E.U.U.	79,915
Standard of Venezuela	Tenerife	137,330
Standard of Venezuela	Canada	103,110
Standard et al (from Boca de Uracoa)	Guiria	205,620
Standard et al (from Boca de Uracoa)	Aruba	77,720
Total from Maturin		1,358,115

From Barcelona

Standard and Mene Grande	United States	1,101,830
Standard and Mene Grande	Aruba	776,870
Standard and Mene Grande	Curacao	431,520
Total from Barcelona		2,310,220
Venezuela grand total		15,677,260

A FOURTH deep test in the Tarra field, south of Lake Maracaibo in western Venezuela, being drilled by Colon Development Co., Ltd., is progressing below 7,800 ft. Deep exploration on concessions of Colon in western Venezuela was launched in the middle of 1938 in an effort to determine producing possibilities there of Cretaceous beds which produce and eventually outcrop in the Barco concession just across the international boundary in eastern Colombia.

The first deep test, Colon T-86, was drilled to 6,690 ft. where mechanical trouble developed. Colon T-93, the second deep test, was drilled to 7,700 ft., where mechanical trouble prevented progress and it was plugged back for completion in one of the Tarra field regular pays found from 3,000 to 5,000 ft. Since reaching 8,532 ft. in December 1939, no report has been issued on Colon T-99, the third deep test, and it is not known whether the company succeeded in developing deep production. Reports have disclosed no details of operations since the European war started.

Pure Oil Co. is reported planning to develop its Netick properties in the western part of Venezuela.

Colombia . .

War Causes 22.7 Per Cent Decline in Oil Exports

EFFECT of the war on Colombia's exports is apparent in a comparison of exports for the first quarter of 1941 and for the first quarter of 1940. Petroleum shipments from Colombian ports in the January-March period of 1941 were 4,284,000 bbl. against 5,544,000 bbl. in the same period of 1940, a drop of 1,260,000 bbl. or 22.7 per cent.

Comparative figures in barrels by months follow:

Month—	1941	1940
January	1,381,000	1,790,000
February	1,485,000	2,197,000
March	1,418,000	1,557,000
Total	4,284,000	5,544,000

Mexico . .

Offer Reported Made for 2,000,000 Bbl. of Crude

AN offer to purchase 2,000,000 bbl. of crude oil in 1941 from the 50 independent American and Mexican producers in Mexico has been proposed by the federal petroleum administration, according to reports from Mexico City. The American producers are those which were not included in the expropriation decree which went into effect in March 1938.

According to reports, the oil would be resold to United States refining companies as a step in Mexico's plan to obtain new markets to replace those lost as a result of the war in Europe. The war cost Mexico two of her principal foreign markets, those of Germany and Italy.

Chile . .

United States Largest Source of Chilean Oil

CHILE continued to depend principally on the United States for its petroleum supplies last year, reports reveal, comparing her imports for 1940 against those of 1939. Chilean imports in 1940 totaled 5,444,000 bbl. against 4,453,000 bbl. in 1939, an increase of 991,000 bbl. Her sources of supply are indicated in the following table:

(Figures in barrels)

Supplying country:	1939	1940
United States	2,392,000	2,402,000
Netherlands West Indies	919,000	1,870,000
Peru	506,000	921,000
Venezuela	551,000	17,000
United Kingdom	11,000	42,000
British India	34,000	5,000
Others	40,000	187,000
Total	4,453,000	5,444,000

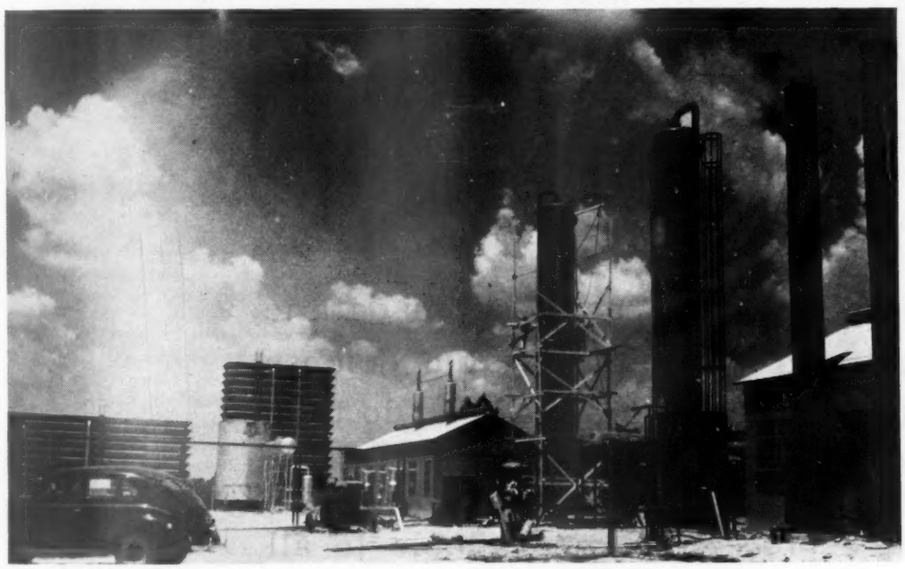
The bulk of Chile's imports in 1940 consisted of fuel oil which accounted for 4,042,000 bbl. of the total and an increase of 1,100 bbl. from the preceding year. Imports of gasoline totaled 907,000 bbl., up 105,000 bbl., while imports of diesel oil dropped 209 bbl. to 437,000 bbl. Imports of paraffin wax dropped 1,276,000 lb. to 16,367,000 lb.

Arkansas' Sour Gas May Be Used to Fuel Electric Plants

By GEORGE WEBER

AN early decision is expected on the proposed construction of gas-fired steam-electric plants in South Arkansas to serve aluminum manufacturing in that state. The Arkansas Oil and Gas Commission and Arkansas Public Utilities Commission, named coordinating agencies by Governor Adkins, have received assurances from operators of gas properties in South Arkansas, that the project will be given priority on gas demand.

The swift action of the state bodies and the oil companies should assure a quick decision on the part of the Government, to locate the industrial-defense project in South Arkansas. The agreement would accrue benefits to both parties to a gas contract for it would provide a source of power near important bauxite deposits, eliminating transportation problems, and at the same time it would assure the first major outlet for sour gas in South Arkansas. In addition, the industry shows promise of permanency after the present emergency has expired, for Arkansas has long been cited as a logical area for processing its own aluminum resources.



This desulfurization plant is under construction by Lion Oil Refining Co. at the Magnolia field. It will treat gas for use as refinery fuel. Similar plants may be constructed at Big Creek, Dorcheat and McKamie to sweeten gas for fuel in the proposed steam-electric power plants

At a meeting in El Dorado, Ark., last week, operators' representatives in the Dorcheat field of Columbia County met with officials of the Arkansas Oil and Gas Commission and generally agreed to the terms which operators at McKamie and Big Creek had previously offered prospective gas consumers. With this support, the state can now assure a daily supply of 50-60,000,000 cu. ft. of gas, backed by a sufficient reserve to provide long-term contracts. The tentative price of the gas was set at 2 cents per 1,000 cu. ft., untreated in the fields, or 4 cents, sweetened.

Reserves of gas in the three fields concerned are listed in the accompanying table. Although the estimated area of the McKamie field may exceed its actual extent, since a recent outpost operation proved a failure, a new gas-condensate discovery, 5 miles east of the Dorcheat field, is expected to more than offset the disappointment at McKamie. Reserves shown in the table are considered conservative. Reserves already proven by actual production are estimated capable of supplying the 50,000,000-cu. ft. daily requirement for over 10 years. On the basis of expected proven reserves the producing period is greatly increased. None of the fields is considered more than partially developed, and approximations of reasonably expected extensions of currently productive acreage bring the reserve estimate to 858,000,000,000 cu. ft., sufficient to care for the requirements of the steam-power plants and other industries.

The high sulfur content of South Arkansas gas has largely prevented it from finding a satisfactory outlet. Hydrogen sulfide varies from 360 grains per 100 cu. ft. at Big Creek to 4,250 grains at McKamie, the latter being the sourest gas yet discovered in a major reserve. In addition to the sulfur, relatively high inert gas fractions have resulted in low British thermal unit values.

Neither high sulfur content nor low heating value prevent efficient utilization of the gas in South Arkansas, however, for its use as boiler fuel is possible after desulfurizing. Low-heat content will not prevent efficient use close to its production source.

Desulfurizing Plant Installed

It is expected that two steam-power plants each developing 90,000 kw. will be constructed on the Ouachita River in the vicinity of Camden. Desulfurizing plants will be located in the respective fields. This will be necessary because of the varying sulfur content of the gas. Commercial treating has been proven feasible. The Lion Oil Refining Co. will begin operations in a desulfurizing plant August 1, which will ultimately process 15,000,000 cu. ft. daily in the Magnolia field. This gas, produced with oil, was formerly flared, but will eventually find complete disposition as refinery fuel at El Dorado.

Similar treating plants will be built at McKamie, Dorcheat and Big Creek if the gas demand materializes, and natural-gasoline-extraction facilities will be constructed in connection with them, netting added recovery of condensate from the high-pressure gas. While such treating plants are costly, the adequate reserves will allow construction of large-capacity units, thus reducing treating cost to less than 2 cents per 1,000 cu. ft.

If the problem of dealing with carbon-dioxide fractions can be successfully solved in the future, there is a possibility for added returns through manufacture of free sulfur from the hydrogen sulfide removed from the gas. This would net particularly large returns at McKamie. However, the manufacture of such byproducts is now secondary in importance to the utilization of the treated gas.

The outlet for sour gas will solve the problem now facing the Oil and Gas Commission and operators in the fields. Since McKamie and Big Creek are classed as gas fields, state law requires that wells be produced only when a legal disposition of gas is available. Limited demand is now available for drilling and other purposes while the fields are undergoing development, but ultimately a large outlet must be found to assure practical payout of the wells.

GAS RESERVES IN THREE SOUTH ARKANSAS FIELDS

Field:	Big Creek	Mc-Kamie	Dorcheat
County:	Columbia	Lafayette	Columbia
Proven area (ac.)	40	1,120	520
Estimated area (ac.)	2,000	4,500	3,100
Proven reserves, billion cu. ft.	40	150	26
Probable reserves, billion cu. ft.	67	700	91
Gas-liquid ratio, cu. ft. per bbl.	19,800	8,000	8,000
Producing depth, ft.	7,960	9,200	8,850
Reservoir pressure, lb. per sq. in.	3,723	4,365	3,805
Number of wells	1	7	13
Av. pay thickness, ft.	35	100	40
Gas analysis:			
Hydrogen sulfide, %	.60	6.70	3.10
Carbon dioxide, %	3.40	4.30	2.00
Methane, %	50.24	63.00	77.14
Ethane, %	4.78	7.24	5.83
Propane, %	2.04	3.28	2.76
Isobutane, %	.77	1.06	1.14
n-Butane, %	.83	1.31	1.19
Pentanes, %	.50	.85	.82
Hexanes, %	.14	.26	.25
Heptanes and heavier, %	.07	.10	.07
Nitrogen, %	36.63	11.90	5.70
Gasoline content (g.p.m.)	.787	1.225	1.183
Specific gravity	.828	.8177	.7334
B.t.u. (including H_2S)	719	1,006	1,081

Burner Institute to Consider Oil Supplies

NEW YORK.—Ray C. Whipple, president of the Oil Burner Institute, has called an emergency meeting of the membership to be held at the Griswold Hotel, Eastern Point, Conn. The regular quarterly meeting of the board of directors of the institute will be held the same day at Eastern Point.

Among the developments to be discussed at the meeting will be the oil-supply situation for the coming season. President Whipple, in calling the meeting, said he had recently visited the offices of the O.P.M. on priorities and of the petroleum coordinator and "from these conferences it has been impressed upon me there is a dire necessity for calling a meeting for the purpose of placing before the industry the impressions and information obtained at these conferences."

Dubbscracking—and more

Office of Production Management would like to see increased construction of refinery capacity to care for possible contingencies and to make it possible to improve octane rating of gasoline used by the military services—DR ROBERT E WILSON, O. P. M. Petroleum Adviser, as quoted by NATIONAL PETROLEUM NEWS, May 7, 1941

If "caring for possible contingencies" means making more motor gasoline, Dubbscracking is the way to make it and improve its octane rating at the same time

If it means making special super-octane aviation fuel and other high value defense products, other processes are ready to do that, too—they are doing it

All of these processes are available to all refiners through Universal

Why not find out where they will fit into your operating scheme? Now

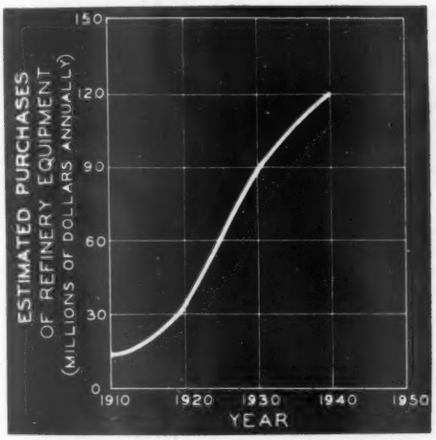
Universal Oil Products Co
Chicago, Illinois

Dubbs Cracking Process
Owner and Licensor

Refinery Expansion

Expenditures for Refinery Equipment Now At the Rate of $10,000,000 a Month

IN order to convert 3,800,000 bbl. of crude oil into marketable products daily, refineries in the United States are being provided with equipment at the rate of $10,000,000 monthly. More than half of this goes into units which expand the capacities of the 460 operating refineries while the balance is used for maintaining the older equipment. Obviously, refineries suffer an abnormally high rate of obsolescence to account for this large outlay of capital. Many times refining processes become outmoded long before they have had an opportunity to pay for themselves.



Curve showing money spent by refineries for increasing capacities of plants and for replacements

The highest degree of obsolescence is in the equipment used for commercial synthesization of important products from the hydrocarbons occurring in the crude oil. As the application of chemistry is extended in refining the expense represented by obsolescence also grows.

Chemistry in refining is given marked impetus by the country's defense program. The larger refiners are installing or operating units designed to furnish high-octane aviation fuels, toluene, benzene, butadiene, and intermediate products for the manufacture of many others such as alcohols, plastics, special solvents and pharmaceutical supplies.

The next highest rate of obsolescence is in the thermal cracking equipment. However, improved design has lengthened the life of the average plant installed today. The 20 per cent depreciation applied to such equipment 20 years ago is probably double that of current experience when using modern units. The combination of obsolescence, corrosion and wear, plus the need for more refinery products year after year, accounts for the large expenditures. The curve shows the trend over the past 30 years.

Recycling News

Lone Star Recycling Plant To Be Finished in October

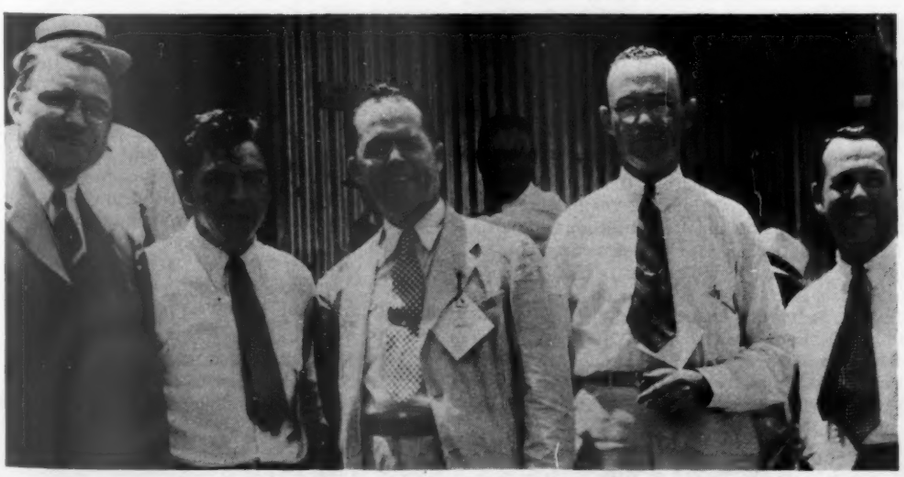
Partial operation of Lone Star Gasoline Co.'s new recycling plant at Willow Springs, Tex., southeast of Longview in Gregg County, is scheduled to start in October. The new plant will be similar in design and construction to Lone Star's Grapeland and Opelika recycling operations. The Willow Springs plant is being built to recycle 35,000,000 cu. ft. of gas per day and produce 750 to 800 bbl. of crude distillate. Gas not used in commercial-fuel systems will be returned to the Pettit zone reservoir.

Distillate production is to be sold to the Rogers Lacy interests which will maintain a pipe line connecting the recycling plant with their Kilgore, Tex., refinery where the distillate will be processed.

Harry Wheeldon, assistant to J. R. Jarvis, superintendent of Lone Star gasoline plants, is general superintendent in charge of design and construction on the Willow Springs plant. Fred Townsend, district superintendent of recycling operations for the entire Lone Star system, is supervisor of construction at Willow Springs.

A. B. Hemphill is the construction engineer on the project and Cecil Louks is construction foreman. Mr. Louks will remain as foreman of the Willow Springs plant following its completion.

DEDICATED COTTON VALLEY, LA., RECYCLING PLANT . . .



Among government and operating company officials participating in dedication of the 150,000,000 cu. ft. Cotton Valley, Louisiana, recycling plant July 10, were: E. J. Hudson, Hudson Engineering Co., which constructed the plant; J. R. Butler, general manager of Cotton Valley Operators Committee; Gov. Sam H. Jones of Louisiana, principal speaker at the celebration; George A. Wilson, attorney, Louisiana Department of Minerals, and M. L. Mayfield, petroleum engineer with Cotton Valley Operators Committee. Inspection of the plant and a barbecue rounded out the program

Natural Gas

Skelly Ordering Materials for Large Gas-Treating Plant

Engineers in the Tulsa offices of the Skelly Oil Co. are placing orders for materials to go into a 20,000,000-cu.-ft.-per-day soda-ash gas-treating unit to be erected at the company's Eunice, N. M., gasoline plant. Construction will start at once and is expected to be completed in 5 months. In the meantime the company will also add 1,200 hp. compressor capacity to the gasoline plant.

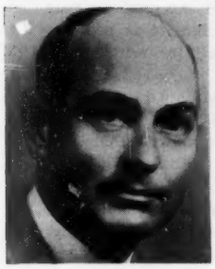
Upon completion of the soda-ash unit the company will deliver treated residue gas from the gasoline plant to a new carbon-black plant to be erected near Eunice by the Columbian Carbon Co. The treated gas to be delivered will have a hydrogen sulfide content not exceeding 15 grains per cubic foot. The residue gas coming from the gasoline plant normally contains 277 grains.

Pacific Lighting Buys Goleta Gas Properties

Three producing properties in the Goleta gas field of Santa Barbara County, California, originally leased and developed by General Petroleum Corp., Standard Oil Co. of California and Shell Oil Co., Inc., have been acquired by Pacific Lighting Corp. Discovered in 1929 and developed by these three companies, gas from this field has been utilized in the past only during periods of heavy demand in winter to augment supplies in southern California. Pacific Lighting Corp. will continue this program. Present daily capacity of the six gas wells in the field against 500-lb. transmission-line pressure is approximately 70,000,000 cu. ft. Production started in 1929 and up to January 1, 1941, approximately 15,000,000,000 cu. ft. of gas has been produced. In the transaction, the first of its kind in California, Pacific Lighting Corp. acquired three gas wells on the More ranch of General Petroleum Co., two wells on Standard's Chase and Bryce lease and one well on Shell's Bishop lease.

Pacific Lighting Corp. is now constructing a compressor plant with a capacity of approximately 30,000,000 cu. ft. daily in order to store gas in this field. The plant, consisting of four 650-hp. Ingersoll-Rand and one 300-hp. Cooper-Bessemer units and designed for a maximum injection pressure of 2,500 lb., will cost about $450,000 and will be in operation early in August.

CHAIRMEN OF THE DISTRICT FUNCTIONAL COMMITTEES FOR THE FOUR BRANCHES OF THE INDUSTRY



J. W. NEWTON
Magnolia Petroleum Co.

E. G. SEUBERT
Standard Oil Co. (Ind.)

ROY B. JONES
Panhandle Prod. & Ref. Co.

RICHARD S. SHANNON
Minnelusa Oil Corp.

W. A. JONES
Cities Service Co.

C. S. JONES
Richfield Oil Corp.

District Chairmen

(Continued from Page 13)

president of refining Standard Oil Co. of Ohio, Midland Building, Cleveland, Ohio; R. J. Black, refinery manager Sinclair Refining Co., East Chicago, Ind.; Max G. Paulus, vice president of manufacturing Standard Oil Co. of Indiana, Chicago; E. D. Cumming, vice president Shell, St. Louis, Mo.; I. A. O'Shaughnessy, president Globe Oil & Refining Co., Wichita, Kans.; C. L. Henderson, president Vickers Petroleum Co., Wichita, Kans.

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George A. Hill, Houston Oil Co., Houston, Tex.

John W. Newton, vice president Magnolia Petroleum Co., Beaumont, Tex.

H. C. Wiess, president Humble Oil & Refining Co., Houston, Tex.

Roy B. Jones, president Panhandle Producing & Refining Co., Wichita Falls, Tex.

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TRANSPORTATION COMMITTEE

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DISTRICT FOUR

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R. S. Shannon, president Minnelusa Oil Corp., Denver, Colo.

Henry Moyle, president Wasatch Oil & Refining Co., Salt Lake City, Utah.

Burton W. Musser, general counsel Utah Oil Refining Co., Salt Lake City, Utah.

H. Earl Clack, president Clack Oil Co., Havre, Mont.

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W. L. Stewart, vice president Union Oil Co. of California, Union Oil Building, Los Angeles, Calif.

C. S. Jones, president Richfield Oil Corp., 555 South Flower Street, Los Angeles, Calif.

C. S. Beesemyer, vice president Gilmore Oil Co., 2423 East Twenty-eighth Street, Los Angeles, Calif.

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TRANSPORTATION COMMITTEE

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MARKETING COMMITTEE

Mr. Beesemyer, chairman; O. W. March, vice president Signal Oil Co., Los Angeles, Calif.; J. H. MacGaregill, director Standard Oil Co. of California, San Francisco, Calif.; H. D. Maxwell, Maxwell Petroleum Corp., Tacoma, Wash.; W. T. Dinkins, vice president Richfield Oil Corp., Los Angeles, Calif.; L. G. McLaren, vice president Shell Oil Co., Inc., San Francisco, Calif.; P. E. Allan, general sales manager Tide Water Associated Oil Co., San Francisco, Calif.; B. E. Devere, executive vice president Pathfinder Petroleum Co., Los Angeles, Calif.; Dewitt Knox, vice president MacMillan Petroleum Corp., Los Angeles, Calif.; Walter H. Nielsen, dealer, Los Angeles, Calif.

TAKES SPACE EARLY . . .

Setting a new record for early contracts for the Tulsa International Petroleum Exposition, G. A. Tompson, vice president of the Bethlehem Supply Corp., is shown here receiving the 100th space contract for the May 16 to 23, 1942, show from General Manager William B. Way. This is by far a greater number of exhibitors signed up than at a similar time before the 1940 show, Mr. Way said. The exposition has set August 15 as the deadline for 1940 exhibitors to exercise their options on their old exhibit space

Canada Bans Night Gasoline Sales

OTTAWA, Ont., July 15.—Prohibition of the sale, delivery and distribution of gasoline and motor oils to motorists between 7 p.m. and 7 a.m. on week days and all day on Sundays was ordered by the Canadian Government here today. A 1-cent increase in gasoline prices was also authorized.

CALENDAR OF EVENTS

August

MISSISSIPPI OIL EXPOSITION, Yazoo City, Miss., August 25-30.

September

AMERICAN CHEMICAL SOCIETY, Atlantic City, N. J., September 8-12.

PACIFIC COAST GAS ASSOCIATION, annual convention, Del Monte, Calif., September 10-13.

NATIONAL PETROLEUM ASSOCIATION, thirty-ninth annual meeting, Hotel Traymore, Atlantic City, N. J., September 17-19.

SOCIETY OF AUTOMOTIVE ENGINEERS, national tractor meeting, Schroeder Hotel, Milwaukee, Wis., September 25-26.

NATIONAL LUBRICATING GREASE INSTITUTE, ninth annual meeting, Stevens Hotel, Chicago, September 29-30.

October

WEST VIRGINIA OIL AND NATURAL GAS ASSOCIATION, annual convention, Clarksburg, W. Va., October 2-3.

NATIONAL FOREIGN TRADE CONVENTION, twenty-eighth meeting, Hotel Pennsylvania, New York City, October 6-8.

NATIONAL SAFETY CONGRESS, Stevens Hotel, Chicago, October 6-9.

TEXAS MID-CONTINENT OIL AND GAS ASSOCIATION, twenty-second annual convention, Beaumont, Tex., October 9-11.

AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, Pacific section, Los Angeles, Calif., October 16-17.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division, Dallas, Tex., October 16-18.

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, twelfth annual meeting, Tulsa, October 20-21-22.

SOCIETY OF AUTOMTIVE ENGINEERS, national fuels and lubricants meeting, Mayo Hotel, Tulsa, October 23-24.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Southern California Section, Los Angeles, Calif., October 30-31.

SOCIETY OF AUTOMOTIVE ENGINEERS, national aircraft production meeting, Biltmore Hotel, Los Angeles, Calif., October 30-November 1.

CALIFORNIA NATURAL GASOLINE ASSOCIATION, Los Angeles, Calif., October 31.

November

AMERICAN PETROLEUM INSTITUTE, twenty-second annual meeting, St. Francis and Palace Hotels, San Francisco, Calif., November 3-7.

SOCIETY OF AUTOMOTIVE ENGINEERS, West Coast transportation and maintenance meeting, San Francisco, Calif., November 5-6.

SOCIETY OF AUTOMOTIVE ENGINEERS, national transportation and maintenance meeting, Statler Hotel, Cleveland, Ohio, November 13-14.

December

EXPOSITION OF CHEMICAL INDUSTRIES, eighth annual meeting, Grand Central Palace, New York, December 1-6.

NEW MEXICO OIL AND GAS ASSOCIATION, Artesia, N. M., December 3.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS, Southeastern district meeting, New Orleans, La., December 3-5.

OKLAHOMA STRIPPER WELL ASSOCIATION, Tulsa, December 5.

1942

January

SOCIETY OF AUTOMOTIVE ENGINEERS, annual meeting and engineering display, Book Cadillac Hotel, Detroit, Mich., January 12-16.

February

TEXAS OIL AND GAS ASSOCIATION, Wichita Falls, Tex., February 28.

March

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, spring meeting, Houston, Tex., March 23-25.

April

NATIONAL PETROLEUM ASSOCIATION, thirty-ninth semiannual meeting, Cleveland, Ohio, April 16-17, 1942.

May

INTERNATIONAL PETROLEUM EXPOSITION, Tulsa, May 16-23.

June

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, semiannual meeting, Cleveland, Ohio, June 8-11.

October

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, fall meeting, Rochester, N. Y., October 12-14.

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In the construction of pipe lines, work is often made difficult by the nature of the soil or topographical conditions so that actual laying of the line is only a minor phase of the job. At one section of the 26-in. loop being laid for Natural Gas Pipeline Co. of America in Lincoln County, Kansas, the rocky soil required that nearly all of the ditch be shot. The picture shows the lowering-in gang placing the pipe in the ditch after it has been primed, coated and covered with paper

ENGINEERING & OPERATION

In This Section

JULY 17, 1941

SECONDARY EXPLOITATION USED AT COYLE FIELD OF OKLAHOMA
By Harry F. Simons ..... Page 34

At the 3-year-old Coyle field in Central Oklahoma, operators are nearing the end of plug-back campaign from the Wilcox sand to the shallower Misener and Hunton section. The result is that the pool's oil production has been increased from around 1,500 bbl. daily to an average of some 4,000 bbl. daily.

DIRECTIONAL DRILLING AS A FACTOR IN OPENING NEW OIL RESERVES
By Gordon Jackson ..... Page 37

Oil and gas accumulations frequently occur in areas where ordinary straight-hole drilling is rendered impractical due to surface improvements, bodies of water or other reasons. In these instances, as well as for prolonging the productive life of old wells, directional drilling is being widely used to advantage.

EFFECT OF CALCIUM CHLORIDE IN OIL-WELL CEMENTS
By F. N. Alquist and H. H. Miller ..... Page 42

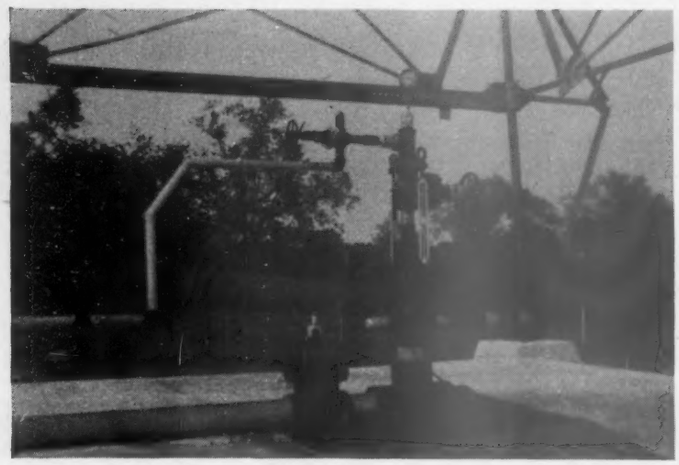
In oil and gas-well cementing operations many special cements have been developed for obtaining high early strength, faster set, easily pumpable slurries. How calcium chloride may be used advantageously with portland cements to improve their fitness for oil-field use is discussed.

FUNCTION OF A PLANT WELDERY IN MAINTAINING EQUIPMENT ..... Page 53

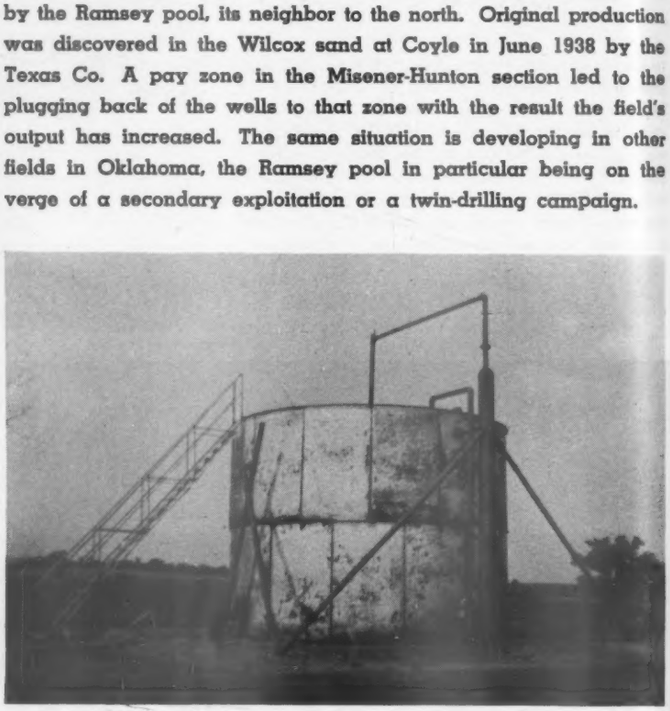
In the oil industry wide use is made of welding in the repairing and fabrication of equipment, both in the field and in the shop. How a welding service operates in the marketing and distributing organization of a major oil company is described.

REFINERY GADGETS ..... Page 38
OPERATING IDEAS ..... Page 41
DEEP-WELL PRACTICES ADAPTED TO SHALLOW DRILLING ..... Page 52
SAFETY: Blowout-Preventer Insert Supported by Cable ..... Page 53
QUESTIONS ON TECHNOLOGY—By W. L. Nelson ..... Page 56

Secondary Exploitation Used At Coyle Field of Oklahoma



The Coyle pool in southern Payne County has been overshadowed by the Ramsey pool, its neighbor to the north. Original production was discovered in the Wilcox sand at Coyle in June 1938 by the Texas Co. A pay zone in the Misener-Hunton section led to the plugging back of the wells to that zone with the result the field's output has increased. The same situation is developing in other fields in Oklahoma, the Ramsey pool in particular being on the verge of a secondary exploitation or a twin-drilling campaign.



Above: Well flowing from the Wilcox sand has 900 lb. pressure on casing, 600 lb. on tubing and 5 lb. on separator. Right: Hunton production is often accompanied by lots of water. This 1,000-bbl. wash tank is used for separating the bulk of the water from the oil production

By HARRY F. SIMONS

THE 3-year-old Coyle pool in Township 17n-1e, Payne County, Oklahoma, is nearing the end of the second stage of its development—the plugging back of wells originally bottomed in the Wilcox sand to the productive zone in the Misener-Hunton section. At the present time only two wells are still producing from the Wilcox sand, the remaining wells having been plugged back or abandoned.

No new processes have been developed during this program of secondary exploitation although practically all of the tools known to the industry have been used. For a time it appeared as though the field might be the first one in Oklahoma where the two-zone method of production would be allowed but the necessary orders from the Corporation Commission were not forthcoming and this plan had to be dropped.

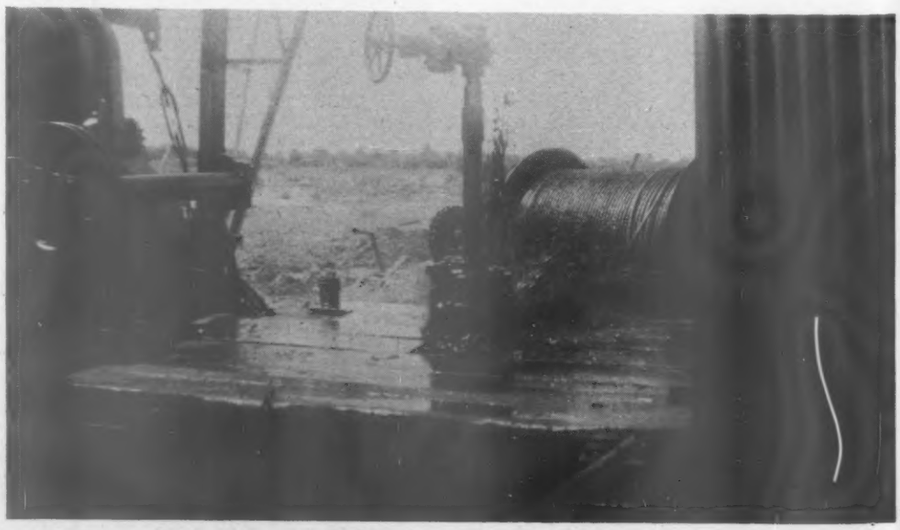
The suggested method has been tried in other areas and found to work satisfactorily. It consists of running a stationary packer between the two productive zones through which tubing is run. The tubing has perforations which can be located either above or below the packer, the production thus being obtained from either the upper or the lower zone. There are other methods of accomplishing the same objective. The principal objection was the difficulty of keeping production records for proration purposes.

Water Creates Problem

Production in the Misener-Hunton section has been known to exist since early in 1939 when the field began to enjoy active development to the Wilcox. In 1940, as the water began encroaching on the edge wells, operators began to plug back the outside wells. This presented the problem to the offset operators of either drilling twin wells, plugging back or operating by the two-zone method. The latter was barred because of legal restrictions and the first was not feasible because of the economic hazard.

The meeting of offset requirements hastened the plugging back of some wells, although generally these had declined substantially and shortly would have approached the stripper class. Water also presented a problem as the lifting costs were mounting. Some of the wells have been only temporarily abandoned in the lower formation while there is no hope of reopening others in the Wilcox

Two methods of plugging back have been used depending on whether there is intentions of later going back to the Wilcox sand production. For permanent plugging of the Wilcox, operators have used several yards of sand, washed into the hole, to fill up the shot hole in the formation and topped this with a cement plug (about six sacks) extending up into the casing. Several attempts were made to fill the shot cavity with cement slurry, but as there was no way of gaging the volume of hole this method was unsatisfactory.



Running tubing on the recompletions is sometimes complicated by the well making a head. Tubing crew has installed gate valve on the tubing and forced the oil through the head

Where the well is to be produced later from the Wilcox sand, operators have used a cement retainer set as a bridge plug, thus positively sealing off the lower formation as long as the upper zone is produced. The bridge plug can be easily drilled out at any later time with either cable tools or rotary equipment. The cement and sand plug can also be removed although it would be more trouble.

Most of the Wilcox wells were producing from a total depth of approximately 4,950 ft., while the upper productive zone is around 4,700 ft. depending on the elevation and the position of the well on the structure. The upper pay section is composed of about 9 ft. of saturated Misener sand and 2 ft. of richly saturated Hunton lime below which there is considerable water. There is no evidence of an impervious layer between the sand and lime sections.

First attempts to obtain the upper production resulted in locating the perforations too low and considerable water accompanied the oil. The method used now is to perforate the complete Misener section and only the upper portion of the Hunton. Even with these precautions taken, there is often more water encountered than is desirable. The more prolific production is found in the Hunton and for this reason the operators are willing to risk water to obtain high potential.

The number of shots used in gun perforating has run from as few as 10 to as many as 150 with about 65 being the average. The number of shots depends on how much pay section is tapped and whether any shots were wasted by shooting too high or too low. Some indication of the capacity of small holes through the casing to produce is given by one well which was perforated with only 10 shots. This well made 900 bbl. of fluid on a pumping test.

Wells are swabbed after perforating the casing and then the tubing run to bottom for acidizing with about 1,000 gal. of acid. The Hunton lime reacts quite rapidly to the ordinary acid while the Misener is slightly reactive. If the wells will flow they are allowed to clean themselves and eliminate the load oil and spent acid. Pumping wells are swabbed through the tubing before the rods are run and the unit installed.

It was necessary to use a pressure-control system for running the tubing after perforating on one of the first wells plugged back on the better part of the structure. The tubing was snubbed into the hole through blowout preventers and control heads. On subsequent completions this was found to be unnecessary, although some of the wells head up and flow as the tubing is being run preparatory to acidizing. A pressure type tubing head is used to keep the oil from flowing out of the annulus while a disk is placed in a tubing collar; the disk can be removed later with any kind of a weight or sinker bar.

Pumping Equipment

Some of the wells have been prolific producers from the Misener-Hunton section, the best one flowing approximately 5,000 bbl. per day. As the high production rate is due to the readiness with which the lime formation gives up the oil, the wells naturally decline rapidly if produced wide open. Withdrawal from the field is restricted by the state Corporation Commission to around 4,600 bbl. daily, all but 460 bbl. of which comes from the Misener-Hunter.

An indication of the effect of the plug-back work is given by the production figures for the field. Up until November last year, when the plug-back campaign got into full swing, the field made around 1,500 bbl. daily. For the first 6 months of the present year the field has averaged approximately 4,000 bbl. of pipe-line oil daily.

Practically all of the wells in the field are equipped with 7-in. casing and 2½-in. tubing. Flowing wells are equipped with a fairly simple hookup consisting of the master gate and casing tee on the 7-in. pipe, tubing head, gate valve and adjustable choke. The production from the wells flows through a separator.

Pumping wells are equipped with heavy beam units because of the large amount of fluid being handled. One well pumped 900 bbl. of oil and water for a considerable period. Electrical centrifugal pumps have been used to pump off the flush water and have lifted as much as 1,700 bbl. per day from one well in the field. As the amount of fluid to be handled in such wells declined, the beam pumps were installed.

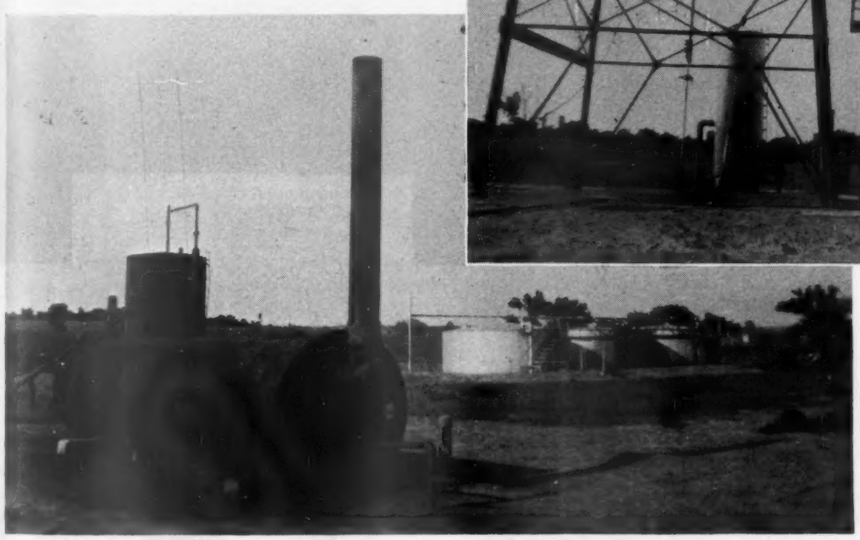
Most of the pumping units in use are the twin-crank double-reduction gear type although some with single-reduction gears have been used. These 50-hp. units have a maximum stroke of 72 in. and can run as high as 30 s.p.m. The units are equipped with automatic shut-down devices which short the magneto on the engine in case the rods break. Generally the units are not run at the maximum stroke although several wells have been operated at capacity for short periods. One well made 750 bbl. of fluid (600 bbl. water) for a considerable number of days.

Engines driving the pumping units are 50-hp. twin-cylinder gas engines which have a maximum operating speed of 600 r.p.m. These engines are equipped with radiators for cooling the jacket water instead of having circulating tanks. A 15 by 15-ft. building houses the engine and radiator but the building has louvers in the north side to allow for the passage of enough air to cool the jacket water. The south side of the building is in sections which can be removed during hot weather. A small engine and air compressor are used for cranking the engines.

Rod failures in the field have been very few principally because the wells are equipped with the best grade of rods obtainable and generally it is possible to locate the working barrel some distance off bottom. The setting in one well, for instance, is 3,000 ft. although the productive zone is located at 4,700 ft. Combination string of rods are used, the upper portion being ⅞-in. and the lower portion being ¾-in. rods.

Several types of working barrels are in use although all of them are of modern design and construction classed generally as metal-to-metal pumps. As the units on some wells are operated at relatively high speeds, allowance is made for over-travel of the moving part of the pump. One company, using a pump which has a 2-in. diameter traveling outer barrel, his installed 16-ft. pumps. Operating at 28 s.p.m. this pump will lift 700 bbl. per day.

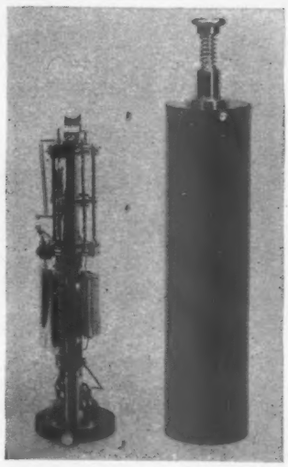
Removal of water produced with the oil is comparatively simple with most of the water being knocked out in a preliminary wash tank. This tank has 1,000 bbl. capacity and is equipped with an outside flume, the production from the wells entering the flume about half way up and dropping to the bottom where it enters the tank. The oil is drawn off near the top of the tank and is run to a heater from which it is sent to another settling tank before being put in stock. The necessary chemical for breaking the emulsion is put in the fluid at the well head.



Above: Fluid capacity of the wells requires large pumping units at Coyle. The 50-hp. double-reduction unit is driven by a twin-cylinder gas engine of the same rating. Engine shed is 15 by 15 ft. and has louvers in one side to allow for passage of air for the radiator. Unit is equipped with an automatic shutdown in case the rods break

Left: Oil separator converted into a heater for breaking of emulsion and removal of water from the crude oil in the Coyle field. Chemical for treatment is added at the well head

Assures the Safety and Accuracy of Selective Perforation



Selective Perforating is a feature of Lane-Wells Gun Perforator operation that has proved its value to oil well operators everywhere during the past nine years because it has made possible maximum recovery of oil at lower production costs.

Selective Perforating makes it possible to open up the narrowest oil strata without breaking up the cement job or letting in water from adjacent water sands.

Selective Perforating is made possible by the Lane-Wells Gun Controller unit which closes the firing circuits one at a time in sequence permitting any variation desired in distance or time between shots. Lane-Wells Gun Perforator control is just one of the many "reasons why" you get more for your perforating dollar when you specify "Lane-Wells Gun Perforating Service." If you would like to know the complete story about this Service as it applies to your own problems, call or write your nearest Lane-Wells Branch. You will be under no obligation and you'll learn why more and more oil well operators have found that it pays to specify "Lane-Wells."

Directional Drilling as a Factor In Opening New Oil Reserves

By GORDON JACKSON
Engineer, Eastman Oil Well Survey Corp.

TURBULENT world affairs have made oil one of the most desired and coveted natural resources. The ownership or control of petroleum deposits can easily mean the difference between security and uncertainty to a nation which is either at peace or at war. Because of the importance and necessity of adequate reserves of oil for national defense, all means of increasing the potential production or enlarging productive possibilities will help strengthen the defense effort. The desire for greater productive possibilities will be stimulated as the United States becomes further engaged in its tremendous effort to build up its implements of preparedness, and larger production will be required in later years to meet increased domestic commercial demand.

Oil and gas accumulations frequently occur in districts where valuable surface improvements exist, such as buildings or flood-control channels, or when the topography renders impractical ordinary systems of well spacing or straight-hole drilling. Frequently locations directly above oil sands are either unsuited for derricks or their construction is not permitted by law. Exploitation of this type of field has demonstrated that regular well spacing can be accomplished by controlled directional drilling. There are instances where directional drilling has made possible the recovery of oil which could not have been produced had the only alternative method been straight-hole drilling.

Directional drilling has been used to advantage in several California fields, notably at Huntington Beach, Long Beach and Wilmington. In the Huntington Beach field practically all tideland development involving oil sands submerged beneath the Pacific Ocean has been accomplished by directional drilling as no surface structures, such as piers or drilling islands, are permitted out beyond the high-tide line.

Wilmington Field Development

A recent and extensive use of directional drilling has been in the Wilmington field of Los Angeles Basin and particularly in the Long Beach Harbor section of the field. Because of existing wharves, piers, warehouses, ship channels, turning basins and other surface buildings incident to manufacturing and shipping industries, it has been necessary to locate wells in suitable spots on nonessential land and use directional drilling to bottom wells beneath a predetermined point.

The accompanying picture of Long Beach-Los Angeles Harbor district indicates the use of extensive directional drilling to reach subsurface formations. Oil sands beneath the channels and dock areas have been developed by slant holes drilled under the management of many different companies. The flood-control channel which borders the eastern edge of the field is drilled up from rig locations along its west bank. No derricks or any drilling equipment have been erected in the channel itself.

Besides waterways and docks much acreage in the district, occupied by shipbuilding companies, electric power plants, automobile assembly plants and many other manufacturing establishments has been successfully developed by directional drilling without disturbing any surface structures.

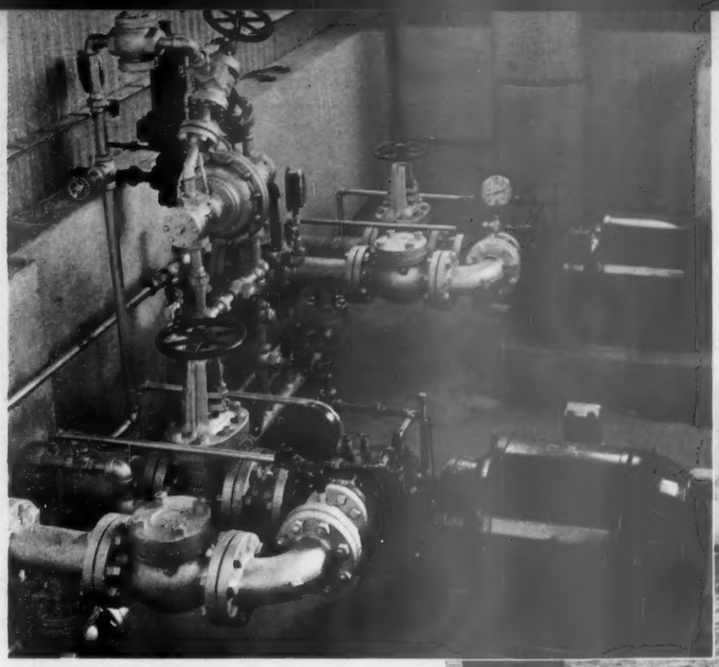
Oil structures occurring near beaches or shore lines have been partly or wholly developed by slant holes. Directional-drilled wells from shore locations eliminates the construction of piers and other marine structures which are costly and also vulnerable and easily damaged. At Huntington Beach the greater portion of the structure lying offshore and submerged has been efficiently developed by slant holes. Many derrick locations have been constructed on the upland according to a central unitized system at a considerable distance back from the shore line. The wells have been directed from these locations to the oil sand in the submerged part of the structure under the ocean. This program has led to safe economic operations which have showed a saving in time and material to the operator producing the oil.

An important application of directional drilling is in prolonging the productive life of old wells. Oil which would not otherwise be produced can be recovered if redrilling operations are shown to be economically feasible. Wells which have ceased to produce, or have gone to water, can be redrilled to more productive locations, at a cost within the economic boundaries governed by the amount of recoverable oil. There are many wells in poor mechanical condition where redrilling of the lower portions would result in increased production and a saving of material.

Directional drilling has been so developed and applied that it is recognized as an integral part of petroleum engineering. The application and use of this technique is mainly done by engineers who have specialized in this field. They are able to control or change the direction and drift of a well to coincide with a predetermined course with remarkable accuracy. Undoubtedly the future will see an increasing use of directional drilling as the benefits and savings become more apparent.

Portion of the Long Beach-Los Angeles Harbor area of California where directional drilling has been extensively used to drill to oil reserves beneath the channels and dock areas

REFINERY GADGETS



Proportioning Valve

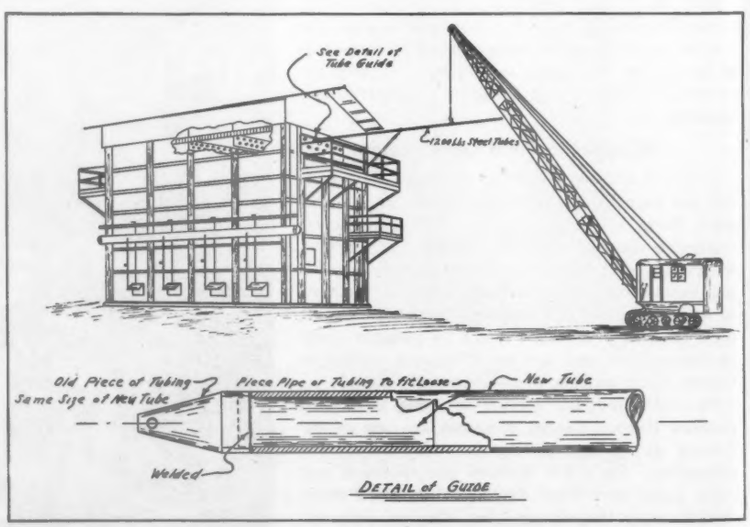
Instead of loading the necessary quantity of one oil and then filling the tank car with another to meet the specifications for a blend, one company has found the job to be done more thorough and equally accurate if a proportioning or mixing valve is installed between the loading lines. Here is shown an installation in which butane and propane may be loaded simultaneously, the desired relationship in the blend having been predetermined.

Hose Forms Flexible Connection on Pump

Sometimes it is advisable to remove a pump for repairs and replace it temporarily with an extra. The second pump might not have identical dimensions. Or, the regular pump might vibrate excessively. In either case, the use of a short length of flexible hose on both the pump intake and discharge has been found practicable.

Engine-Block Vents

Vent lines have been installed in the engine blocks of compressors in one plant to remove any oil vapors which might tend to accumulate between the scavenger cylinder and the piston. By running eight lines to the point of exhaust to the air, the operator can determine which cylinder is giving trouble because any substantial leak will show up as a fog at the end of the pipe.

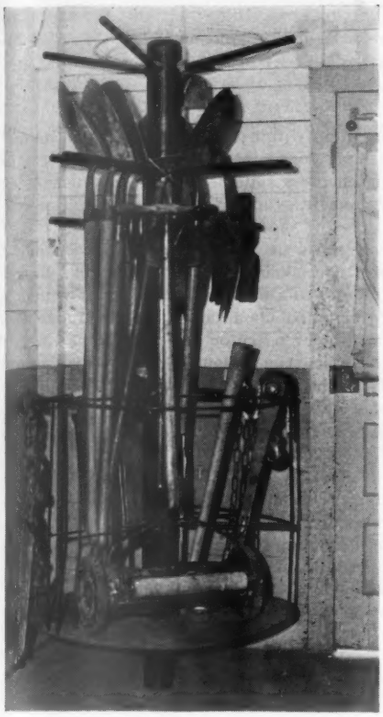

See Detail of Tube Guide
1,200 Lbs Steel Tubes
Old Piece of Tubing Same Size of New Tube
Piece Pipe or Tubing To Fit Loose
New Tube
Welded
DETAIL of GUIDE

Guide Shoe Used to Run Tubing in Pipe Still

A short length of old still tube swedged at one end to a blunt point serves as a guide for running new tubes in a pipe still. The detailed drawing shows how the guide is assembled and how it is used. Obviously, when handling new tubes which weigh 1,200 lb. each it is almost impossible to avoid injuring the ends of the tube or the hole in the tube sheet unless some form of guide is used. This one has proved practicable in every respect and is economical to assemble from salvaged materials.

Operating Ideas

Convenient Tool Rack Requires Little Space



Developed in the Wichita Falls, Tex., district of a gas pipe-line company the use of this revolving rack has spread to other districts of the company because of its convenience and the small space required to store large quantities of tools. The main upright is sleeved over a smaller piece of pipe which is set into the flooring and revolves on ball bearings. The arms are welded on the the main stem.

Safeguarding Blowout-Preventer Control Valves

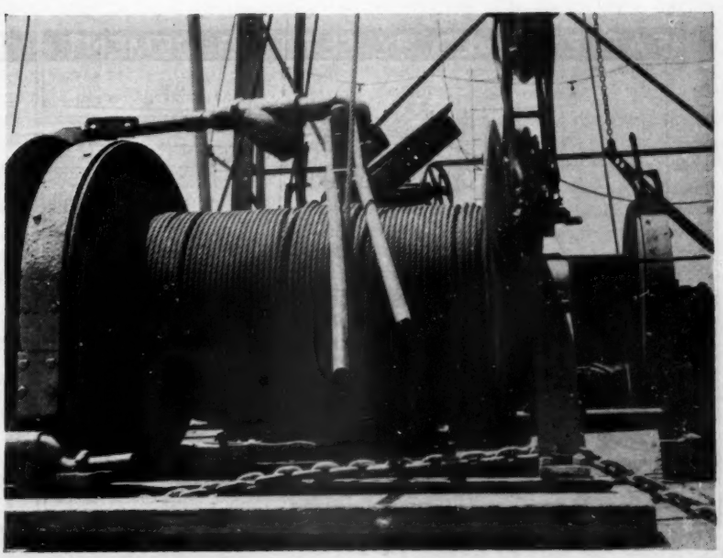
Derrick-floor mounting of the valves used to control the various units of the blowout preventer, affords speeded-up closing of the device in an emergency. Many drilling crews, however, leave the handles off the valves because floor vibration sometimes tends to actuate the valves, causing undue ram wear and imperfect operation in time of need. One drilling company provides against this contingency by attaching the handles to the valves with setscrews, maintaining the handles in the proper operating position by a short line of ⅝-in. sucker rod, its short ends fitting within the open handles and holding them upright. To operate the preventer, it is only necessary to knock out the link, and depress the desired handle to the floor.

Roller on Truck Bed Makes Loading Easy

Numerous winch lines have been broken while loading heavy pieces of machinery on truck beds for moving. Generally, the rear of the bed is protected by a half section of 10 or 12-in. casing and the skid ends of the bigger pieces of equipment can gouge into it. During the past several years many large trucks have been equipped with a roller instead of the usual tail board. Side plates on the truck are built extra heavy so they can act as a bearing for the roller axle. The picture shows a driver removing winch line from a 12-ton tractor after unloading it from the truck.

Replaceable Extensions on Wire-Line Spooler

Three-foot lengths of ¾-in. pipe, slipped over the ends of the spooling device on the sand-line reel, increases the leverage and decreases the effort needed to insure even spooling of the line. At the same time they permit the operator to stand erect and farther away from the rapidly revolving reel. The pipe extensions, being long enough to contact the wire line throughout the spooling, take the wear, and may readily be replaced with new pipe. This leaves the lever and its swivel unaffected by abrasion, thereby greatly increasing their useful life.



Effect of Calcium Chloride In Oil-Well Cements

By F. N. ALQUIST and H. H. MILLER
Dowell Inc.

MANY special cements have been developed for use in oil and gas well cementing operations with a view to obtaining high early strength, faster set, greater durability, and easily pumpable slurries. Although some of these qualities can be obtained by the appropriate addition of calcium chloride to ordinary cements, this knowledge does not appear to have been generally utilized by the oil industry. It is the purpose of this paper to bring to the attention of the industry information upon how calcium chloride may be used advantageously with portland cements to improve their fitness for oil-field use.

The use of calcium chloride in the proper proportions with standard portland cement imparts to the slurry properties that are very desirable for surface casing jobs and for all intermediate and oil strings where bottom-hole temperatures are low. From both the material and the operating standpoints, savings definitely can be effected by the addition of calcium chloride to cement slurry. Considering the availability and low cost of calcium chloride, there is no reason why this technique of cementing oil wells should not be more generally utilized.

Integral admixing of calcium chloride with portland cement concrete is an established practice as the most efficient and economical method of accelerating the setting of cement. Its use is widely recognized in modern concrete practice and many tons of calcium chloride were used in the construction of the Grand Coulee and Bartlett dams, as well as many other Bureau of Reclamation projects. Calcium chloride is also used in structural concrete, highways and concrete products. The additional cost of calcium chloride is nominal as compared with the advantages gained by its use since it (1) imparts high early strength which permits early removal of forms, quicker finishing, and the use of the structure or product, because strength is gained in half the time; (2) insures better workability by maintaining uniform moisture and increasing the density of the mass concrete; and (3) reduces materially the shrinkage of cement mixture.

All of the above advantages accrue when calcium chloride is used with neat portland cement for oil-well cementing.

Essential Characteristics

Field data on oil-well cements and laboratory tests, using the standard American Petroleum Institute cement-testing methods, definitely indicate that cements suitable for oil-well use must be able to function under conditions different from those encountered in construction work. To provide satisfactory performance for casing cementing, plugbacks, squeeze jobs, casing seats, etc., cement should possess the following essential characteristics: (*a*) Make a uniform slurry, (*b*) remain pumpable for a sufficient time to allow placing, (*c*) maintain fluidity regardless of wall conditions in the well, (*d*) set rapidly when in place, (*e*) produce high early strength, (*f*) form an impermeable mass, (*g*) be permanent under varying conditions.

The oil-well operator has at least six types of cement available: (1) Regular portland cement, (2) retarded portland cement, (3) accelerated portland cement, (4) high early-strength cement, (5) oil-well cements, and (6) special oil-well cements.

Time required for a cement to harden in a well is a loss that delays subsequent activities. Improvements in materials and equipment have cut this lost time from 30 days or more to 8 hours and in some instances even less. A quick set and high early strength of cement have contributed to this speed of getting wells into production.

The most important factors which affect the success of a cement job are the characteristics of the formation within the well. The cementing engineer must recognize these varying characteristics and choose a suitable type of cement and the best equipment available to insure satisfactory results.

Cementing is usually done by an independent company specializing in this operation. Equipment used to mix and place the cement which is usually mounted on a large truck includes two open-top water-storage or measuring tanks, a mechanical or jet-type cement mixer, a slurry pump driven by the truck motor or by steam as the case may be, and an auxiliary water pump. The mixing of the cement and water is accomplished by an independently driven mixer, or, if a jet mixer is used, by an auxiliary motor-driven mixing pump. The successful completion of an oil-well cementing job is contingent upon the correct proportioning of cement and water to obtain the desired properties. In order to get this correct proportion it is essential that the cementing equipment be provided with a mechanically controlled device which will accurately proportion the cement and water in the desired ratio. The cement may be added to the mixer by bags or by an automatic conveyor system.

Cementing is started by lowering the casing to the bottom of the well and raising to clear bottom. Mud or well-fluid circulation is then established in most cases to assure the cementing engineer that the well is in proper condition for successful cementing.

Dry cement can be fed to the mixer at an average rate up to 30 bags per minute and if this is not rapid enough more than one mixer can be used. When all the cement slurry has been added, a plug is inserted into the casing to separate the cement from the placing fluid. The depth to which the top plug is placed is determined by accurately measuring the volume displacement of the placing fluid, by following it with a measuring line or by pumping the plug to a shutoff against a

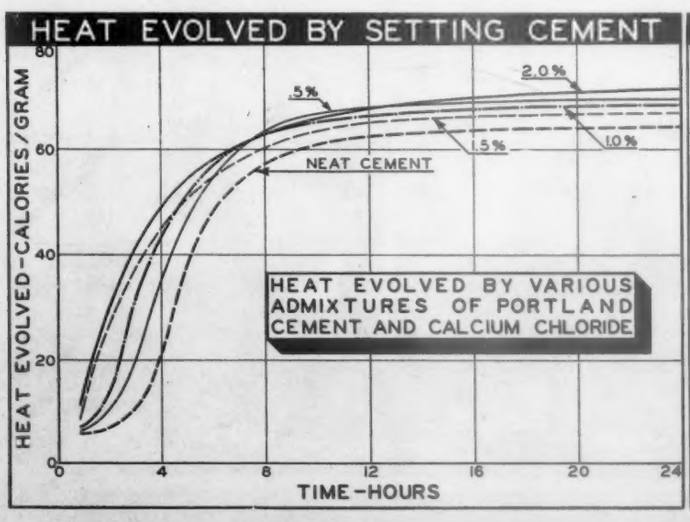


Fig. 1

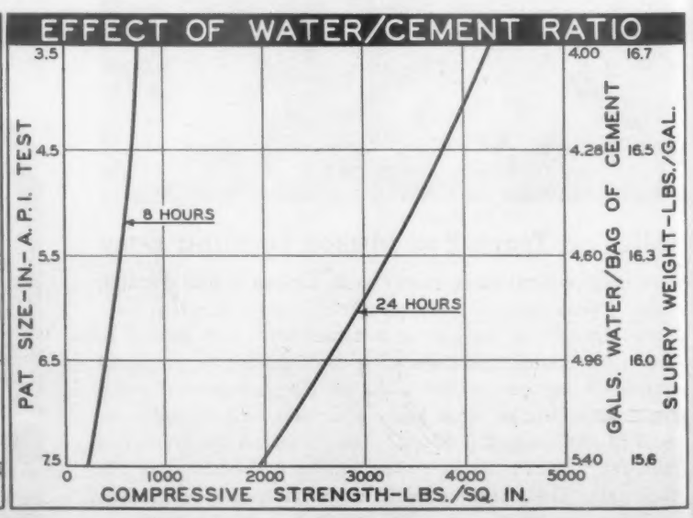


Fig. 2

casing shoe or some similar restriction in the casing. A few feet of cement is usually left in the casing to assure that clean uncontaminated slurry is spotted around the casing seat. The casing is then lowered to the bottom and the top valve is closed to prevent any disturbance during setting.

Since drilling cannot be resumed until the cement has set, the desirability of a quick-setting cement is obvious. The limit to which the set of a cement should be accelerated is determined by the length of time required to place it, and is a function of the depth of the well, volume of cement to be used, and the capacity of the cementing equipment.

Portland cement containing 2 or 3 per cent calcium chloride based on the dry weight of the cement is applicable in cases requiring an initial set of not less than 2½ hours and a final set of 4½ to 5 hours as determined by Vicat needle. If the temperatures of the hole and mixing water are normal, the drilling-in of a well so cemented can be resumed in 8 hours after the first cement is mixed.

Calcium chloride has been used successfully with portland cement in the oil fields of Michigan, Illinois, Kansas, California, Oklahoma, Texas, and other states, but there has been no published data on the effect of calcium chloride on the properties of neat cement for oil-field use.

Table 1 lists some typical examples of calcium chloride field applications. Calcium chloride is added to the water used to mix the cement, or the dry flakes or powder are added directly to the cement mixer.

Chemistry of Portland Cement

A chemical analysis of portland cement shows it to contain as the main constituents calcium oxide (CaO), aluminum oxide (Al_2O_3), and silicon dioxide (SiO_2). In addition, small amounts of magnesium oxide (MgO), ferric oxide (Fe_2O_3), and sulfur trioxide (SO_3) are present. The main constituents listed above occur in the cement in combined form as tricalcium aluminate, tricalcium silicate, and dicalcium silicate. The iron oxide combines to form tetracalcium alumino-ferrite. The sulfur trioxide combines to form calcium sulfo-aluminate, while the magnesium oxide remains uncombined. The strength characteristics of cement at various ages depend directly upon the proportion and degree of hydration of these compounds.

The reactions which take place upon the addition of water have been summarized by Bates and Klein.[1] Briefly, they have made these points:

Tricalcium aluminate hydrates immediately after water is added. The hydrated product is amorphous at first and crystallizes later. Crystals of calcium sulfo-aluminate from the gypsum present form at about the same time. The tricalcium silicate begins to react within 24 hours. All the lime in it crystallizes. The less basic calcium silicate or silica which is left hydrates and forms a gel.

From the above it appears that the early strength of the cement is due to the hydration of the tricalcium aluminate and to the partial hydration of the tricalcium silicates. The further increase in strength up to 28 days is due to the further hydration of the tricalcium silicate and the beginning of the hydration of beta-dicalcium silicate. Gains in strength after 28 days are due to further hydration of the beta-dicalcium silicate. The tetracalcium alumino-ferrite is hydrated during the first 24 hours, but this is not a strengthening factor, probably giving a negative rather than a positive effect. This is the accepted theory of the set of portland cement.

Theory of Setting With Calcium Chloride as An Additive

The calcium chloride which is added to cement can have two possible chemical reactions with the constituents of the cement. First, a calcium chloro-aluminate could be formed similar to the calcium sulfo-aluminate which results from the reaction of calcium sulphate with the tricalcium aluminate. Second, calcium oxychloride compounds could be formed with the free calcium hydroxide which results from the hydration of the silicate compounds.

X-ray crystal patterns of portland cement with varying amounts of calcium chloride as studied in the Dow Chemical Co. laboratories indicated that at the concentration of calcium chloride used for oil-well cementing, calcium chloro-aluminate was formed. At higher percentages of calcium chloride there were indications of the presence of calcium oxychloride, corresponding to the formula $3CaO.CaCl_2.16H_2O$, but up to 3 per cent of calcium chloride flake in oil-well cements, calcium chloro-aluminate was the only compound formed according to these tests.

Work done by Foster[2] and Rapp[3] proves that the rate of hydration is accelerated by calcium chloride during the first 3 days, and that after 28 days it is substantially unaffected or slightly retarded. The initial acceleration is due to the increased hydration of the tetracalcium alumino-ferrite, then the calcium chloro-aluminate and calcium sulfo-aluminate, and finally the beginning of the hydration of the tricalcium silicate. Later acceleration is due to the slight increase in the rate of hydration of the beta-dicalcium silicate. As a result of the increased rates of hydration, heat is evolved at a faster rate. The total amount of heat evolved is practically the same with and without calcium chloride, but the temperature rises earlier when the calcium chloride is used.

The effect of calcium chloride dissolved in the water of the mix is to cause rapid hydration giving earlier maximum temperature and a more rapid set with a high early strength, and finally greater ultimate strength. The ultimate strength may be due to the higher degree of hydration of the beta-dicalcium silicate or, according to Foster, the decreased permeability of the silica gels, indicating a denser gel which would probably have a higher strength.

A graph from Rapp's report, Fig. 1 of this paper, is included because of its general acceptance by cement technicians as the best data showing the effect of calcium chloride on the heat evolved in the setting of cements.

A recent report by Stanton,[4] materials and research engineer for the California Department of Highways, concerning the value of various methods of curing pavements in arid climates, states

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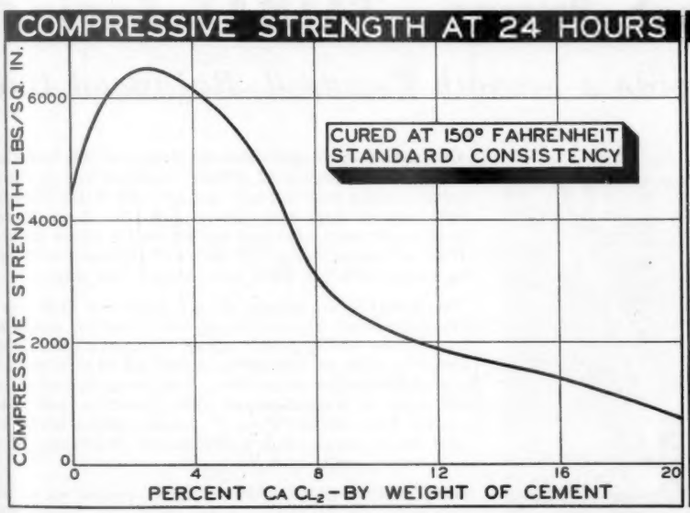


Fig. 3

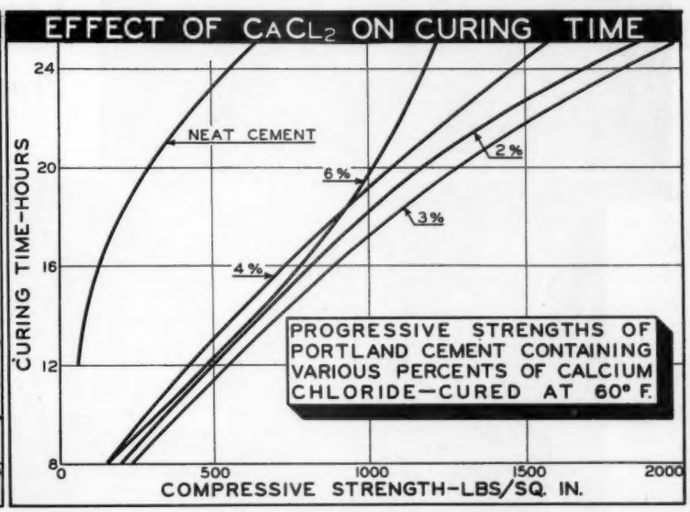
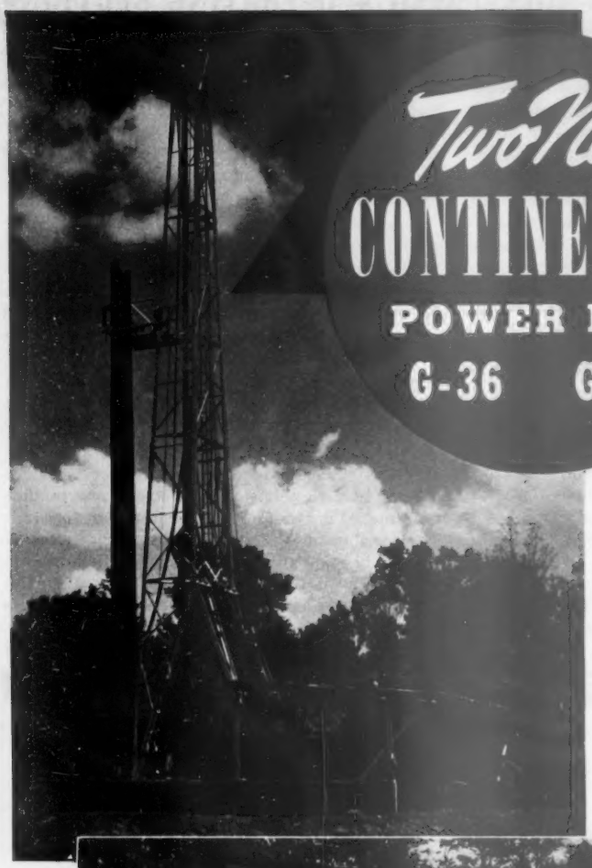


Fig. 4

TABLE 1—EXAMPLES OF CALCIUM CHLORIDE FIELD APPLICATIONS

Well	State	Depth (ft.)	Amount cement, sacks	Amount calcium chloride (lb.)	Per cent calcium chloride	Time when drilled out, hours	How used
A	Michigan	80	50	150	3	10	Dissolved in mixing water
B	Michigan	1,767	40	114	2.85	8	Dissolved in mixing water
C	Michigan	79	45	100	2	16	Dissolved in mixing water
D	Illinois	128	75	200	2	..	Added to mixer
E	Illinois	133	50	100	2	..	Added to mixer
F	Illinois	158	100	100	1	..	Added to mixer.



Two New CONTINENTAL POWER RIGS G-36 G-42

LESS WEIGHT.

EMSCO Transmission and Drawworks ▲ GARDNER DENVER Slush Pumps ▲ CLIMAX Engines

Provide a Smooth Powered, Balanced Unit

Only one thought governed the design of the new Continental G-36 and G-42 Power Rigs—ability to rig-up quickly, make hole fast and economically. After thorough field tests of these two rigs we now offer the G-36 and G-42 as the most advanced equipment for rotary drilling. Here is drilling equipment that will give maximum performance with minimum bulk, weight and price.

The EMSCO drawworks on the G-36 and G-42 has a fabricated steel frame of exceptional strength and rigidity. Drives are pressure spray lubricated. A friction clutch is used on high drum drive and 10-step multiple jaw clutch on low drum drive. Long wearing brake rims are made of pressed forged steel, bolted on and water cooled. The unique "Type J" self-energizing brake has 350° lining contact with a multiplicity of leverage of 56 to 1 at 45° position of brake handle.

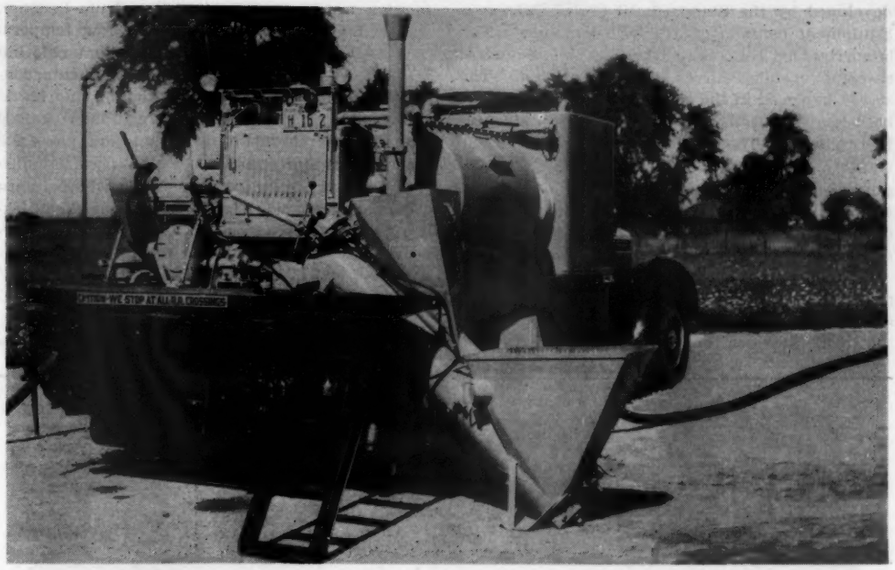
GARDNER-DENVER Power Slush Pumps are admirably suited for this type of power rig service. Outstanding features include divided fluid cylinder construction, alloy iron fluid end and one-piece semi-steel cast frame. Continuous type tooth herringbone gear in power end makes for quiet, efficient service. "Duoseat" valves are especially lightweight, longwearing and efficient.

CLIMAX Power Drilling Units are equipped with dual magnetos, dual carburetors, triple fuel burning equipment, water-cooled exhaust manifolds and engine start. These engines are not an adaptation of an automotive type engine, but were especially designed for drilling service. The R-6-I is used on the G-36 and the R-225 on the G-42 Power Rig.

Climax R-225 Drilling Engines with Climax 5KW Series 6100 Light Plant in foreground. These engines are capable of long uninterrupted service.

Showing how each engine with its section of the transmission may be loaded quickly and easily.

"The greatest increase in strength was in the case of the seven-sack mix with 2 per cent calcium chloride, the average strength increasing from 4,300 lb. per sq. in. at 28 days to 6,400 lb. per sq. in. at 5 years, and 7,700 lb. per sq. in. at 11 years . . . " In his conclusions the author further states, "Calcium chloride incorporated in the mix with the mixing water is apparently effective in maintaining a high-moisture content, requisite for continued hydration and higher strength."



Cementing truck equipped with two screw conveyors and hoppers. The small conveyor may be used to proportion auxiliary materials, such as calcium chloride, into the large cement conveyor

Laboratory Testing Procedures

1. Water-cement ratio by ring test.

Because of the effect of particle size, mixing-water temperatures, degree of mixing, etc., on the flow characteristics of the cement slurry, oil-well cements are compared on the basis of fluidity rather than on a constant water percentage. The American Petroleum Institute method consists of shaking 200 g. of cement and a measured volume of water at 80° F. together for 2 minutes. The pat size is determined by pouring the contents into a brass cylinder, 2 in. in height and 1⅝ in. i.d., which has been placed upright in the center of a glass plate. The cylinder is lifted slowly permitting the slurry to flow forming a smooth round pat. A pat 7½ in. in diameter is taken as the measure of standard fluidity.

The standard American Petroleum Institute ring test was used and Fig. 2 shows the effect of water-cement ratio on 8 and 24-hour compressive strengths of portland cement containing 3 per cent calcium chloride cured at 60° F.

As would be expected, the data shows that compressive strength increases as water-cement ratio decreases. It was found in the laboratory that the addition of up to 3 to 4 per cent calcium chloride by weight had little effect on the water requirements of 25 cements tested. Above these percentages, however, there is a progressive increase in the water-cement ratio for standard consistency with an increased addition of calcium chloride. The practical aspect is that the same or slightly less water ratio can be used with 2 to 3 per cent calcium chloride cements as with portland cement in the field operations.

2. Compressive strength.

The usefulness of an oil-well cement depends on its ability to harden and develop a high early strength permitting drilling to be resumed with as little delay as possible. The curing conditions are designed to comply as nearly as possible with well conditions. In the standard American Petroleum Institute method, 2-in. cubes are cured in water at 150° F. and at 1, 3, and 7-day intervals. In order to show the adaptability of calcium chloride to relatively low-temperature use, cubes were cured at 60°, 110°, and 150° F. These cubes were made of a slurry of standard fluidity as determined by the ring test and allowed to harden in the water bath. They remained in the water until they were taken out to be broken. The optimum amount of calcium chloride to give the greatest increase in strength was 2 to 3 per cent by weight of the cement.

Fig. 3 shows the general effect of varying the percentages of calcium chloride up to 20 per cent of the weight of the cement and cured at 150° F. The important conclusion to be drawn from this curve from the viewpoint of field application is that low percentages, preferably between 2 and 3 per cent calcium chloride, give optimum increases of compressive strength.

Fig. 4 shows the effect of varying the length of curing time at 60° F. with up to 6 per cent calcium chloride. The data definitely indicates advantages of calcium chloride at low temperatures with curing times up to 24 hours. Fig. 5 gives data for longer curing times and wider range of curing temperatures, still showing the advantages of adding 3 per cent calcium chloride.

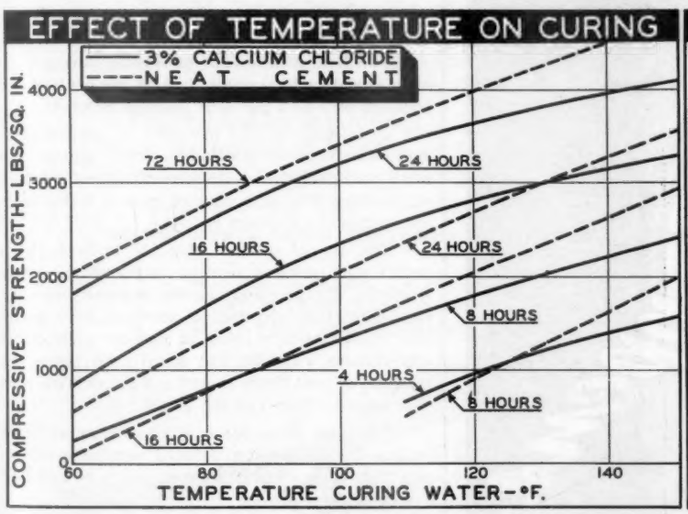


Fig. 5

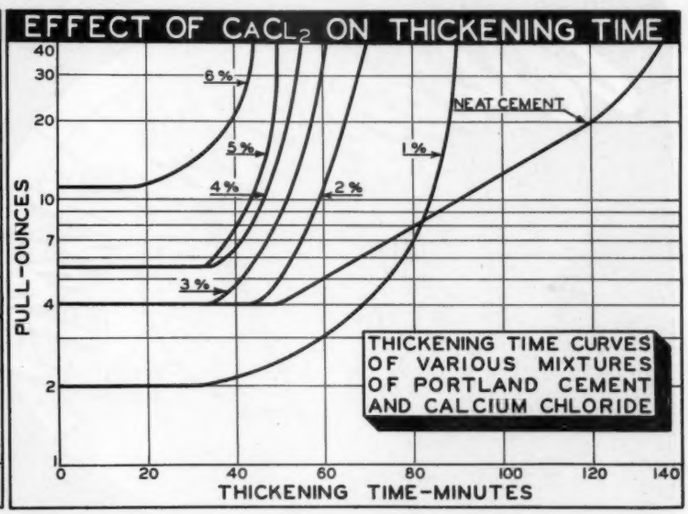


Fig. 6

Most work by previous investigators on the effect of calcium chloride on either concrete or neat cement, as well as our present data, have been studied by compressive and tensile-strength methods. The results of such tests definitely show that the addition of 2 to 3 per cent calcium chloride to portland cements increases the high early strength. Oil-well operators can take advantage of this property as well as users of concrete. The main difficulty in a more widespread oil-field use has been that the effect of calcium chloride on the compressive strength of a large number of oil-well cements had not been definitely measured under a wide enough set of conditions so far as temperature and proportions of calcium chloride are concerned. However, both our laboratory tests and field experience show that if 2 to 3 per cent calcium chloride is used with regular portland cement, no trouble will be encountered when handled by proper methods.

3. Thickening time.

In choosing a cement for oil-well use it is necessary to know the length of time that it remains in a pumpable state under well conditions. The machine used for this measurement is the one

developed by the Standard Oil Co. of California. Equipment consists of a slurry container which is surrounded by a water bath complete with a rheostat paddle stirrer and thermostat. The slurry is placed in the container at 80° F. and the bath temperature is raised 1° a minute until 140° F. is obtained. The temperature is then kept constant for the duration of the run. The stage of pumpability is measured by taking the torque readings on a spring scale attached to the slurry container. When the pull reaches 40 oz., the limit of the pumping stage is reached.

To determine the suitability of calcium chloride cement at relatively low temperatures, tests were also made using the same apparatus but allowing the temperature to remain at 80° F. The thickening-time test by the American Petroleum Institute standard procedure, or at a fixed low temperature, 60° or 80° F., shows that calcium chloride accelerates the thickening time of cements considerably and that the use of calcium chloride is not feasible on deep wells where it takes longer than 45 to 60 minutes to mix, pump and place the cement. Calcium chloride may be used satisfactorily on the low-temperature wells where it has been recommended. Fig. 6 shows that the thickening times are decreased with increasing percentages of calcium chloride from 2 hours to between 40 and 50 minutes.

4. Time saving.

Time is especially important in oil-well operations when crews are unable to proceed with drilling operations. Our field experiments confirm laboratory findings and show that sufficient strength is obtained using regular portland cement with 2 to 3 per cent calcium chloride so that drilling operations can be started up with only a minimum delay.

5. Costs.

Present practice calls for the use either of relatively expensive special oil-well cements or "high early" cement, whereas the technique employing the addition of calcium chloride is simple and allows the relatively cheap ordinary portland cement to be used instead. Engineers in charge of well operations can readily make their own cost comparison for any job under consideration based on market prices and the data available in this article.

Conclusions

1. The use of regular portland cement with 2 or 3 per cent calcium chloride added offers a saving of time and money to oil operators in cementing surface and low-temperature strings. The calcium chloride can be added in the form of a flake, a powder, or a solution, with the same results in every case.

2. The final setting time of regular portland cement is reduced approximately 30 per cent by the addition of 2 to 3 per cent calcium chloride.

3. Quantities up to 4 per cent of calcium chloride admixed with portland cement require the same or slightly less water-cement ratio for standard fluidity. The 25 brands of cement tested gave approximately uniform results.

4. The use of calcium chloride in both "high early" and portland cement increases the early strength. The portland cement and calcium chloride admixture acquired a strength at 8 hours that was practically equal to that of "high early" and calcium chloride and more than twice the strength of neat "high early" at 8 hours. This held true whether tested at 60° or 150° F.

5. Two and three per cent of calcium chloride reduce the thickening time of regular portland and high early cement approximately 50 and 33.5 per cent, respectively.

6. The quantity of heat generated during the setting of regular portland cement with calcium chloride is no greater than when the calcium chloride is omitted. The heat is generated within the first 24 hours, parallel with the increase of strength.

7. The setting and thickening times of regular portland cement are greatly accelerated by increased temperature regardless of whether or not calcium chloride is used. Three per cent calcium chloride mixed with regular portland cement reaches approximately 1,000 lb. per sq. in. in 12 hours at 68° F.

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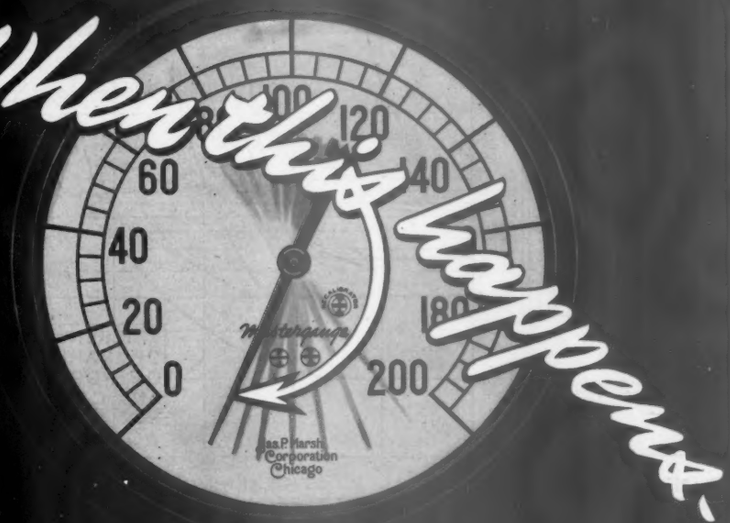

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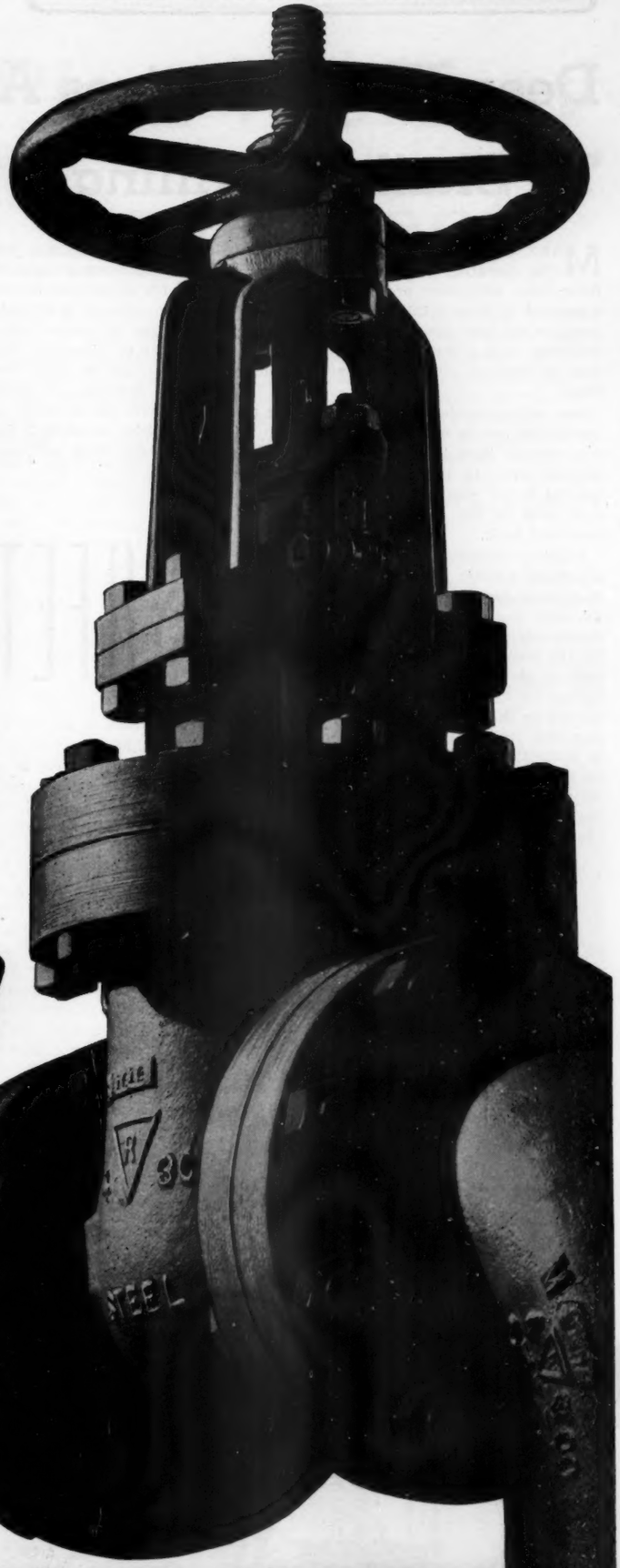

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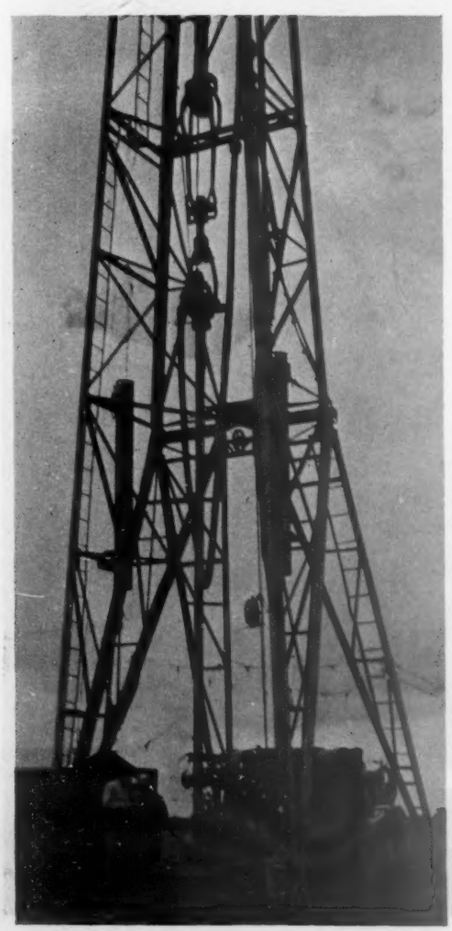
Deep-Well Practices Adapted To Shallow Drilling

MANY of the innovations and improvements in the operating end of the oil industry arise from some particular problem or necessity encountered in deep drilling or production. These practices are later adapted to shallower operations whenever it is found that they will decrease the time or the cost, or they present some improvement.

One such practice, originally developed in California for use on wells drilling below 10,000 ft., has recently been introduced on rigs in Illinois drilling wells to less than 2,000 ft. The new method is the supporting of the swivel and the drill stem by the elevators instead of the conventional hook.

Support of the drill stem in this manner requires an adapter which fits on the swivel bail. The upper part of the adapter is a doll head of the same diameter as the drill pipe around which the elevators can be latched. Instead of unlatching the hook after lowering the kelly joint in the rathole, the elevators are unlatched; when picking up the kelly, the elevators are set down and latched on the adapter much in the same manner as a new joint is picked up. Principal difference in operation necessary is that the rathole must be drilled a little deeper so the swivel will be only a little distance above the floor instead of the customary 8 or 10 ft. This in itself is an advantage as it will serve to prevent bending or kinking of the kelly joint when using a small kelly.



The elevator support for the kelly can be used with or without a hook as the operator desires. Sometimes it is advisable to use the regular hook to get the proper swing on the elevators and to make an extremely flexible connection above the floor. On the other hand, the move towards portable derricks and masts often makes it desirable to have an extremely short hookup. When using an 86-ft. derrick, it is often impossible to pull doubles (60-ft. sections) of Range 2 pipe. Shortening of the hookup through replacement of the hook by a connector will permit doubles to be pulled easily.

For use with an ordinary block without a hook, it is necessary to have a connector link which possesses the swivel action of the regular hook. A stiff hookup would cause the blocks to twist when rotation was imparted to the drill pipe due to encountering a tight place while going in or coming out of the hole. The only difference between these connector links and a hook is that the former is built to support either elevators or swivel or both.

Originally this method was developed along with a direct-reading weight indicator which showed the load supported by the hook in deep wells. This was done by replacing the usual becket on the blocks with an attachment which included a swivel support for the elevators and a diaphragm.

SAFETY - Blowout-Preventer Insert Supported By Cable

THERE is no tabulation kept of the blowouts which occur on rotary drilling wells annually but it undoubtedly is only a fraction of 1 per cent of the wells completed. When a blowout of any size does happen, it is recorded widely, particularly if any damage results.

Reason for the relative few number of uncontrolled wells is the respect which all drilling crews and producing organizations have for this phenomenon. Once a workman or supervisor has gone through the fighting of a wild well, or once a man has seen such a sight, he will never forget the necessity of keeping a well under control.

Between the time a well begins to show signs of kicking the mud out of the hole and the time when heavy mud can be pumped in to control it, it is necessary that some means be provided for closing in the well. There are several types of blowout preventers used for this purpose. In areas where there is considerable danger of such an incident, the blowout preventer consists of rams or a diaphragm which stays in place at all time. When there is little danger, or where adequate warning will be given, a blowout-preventer bowl is often placed on the last casing string run, but the insert, which clamps around the pipe, is not put in place until it becomes evident that a dangerous situation is developing. At times a combination of blowout preventers is used.

Several drilling crews have found themselves in difficult situations because they had not prepared for the emergency or lacked the facilities for clamping the insert around the drill pipe. One of the chief dangers is that the insert may be set off in some corner, and subs and connections piled on top of it to the point where it is almost impossible to find it when needed. Frequent washing of the floor, with the insert being thoroughly doused each time, leads to the hinge and latch rusting so it is almost impossible to operate even after it is found.

One drilling crew, working on wells being drilled to the Devonian lime in Illinois, has devised a simple and effective means of eliminating these difficulties. The danger of blowouts is not great but they want to be sure they can cope with the situation.

The blowout-preventer insert is suspended by a wire line which passes through a pulley on the

tong board and which has a counterbalance on the other end. The line divides about 6 ft. from the end with a separate support being provided for each handle in the insert. The insert is held off the floor and it is not subjected to mudding up and corrosion from constant wetting. It is also easily examined and easily oiled so that it is kept in perfect operating condition. In case it becomes necessary to use it, no effort will be required for holding it up while it is being latched. Only thing necessary is to remove the hook which holds it against the side of the derrick, slap it around the drill pipe and then lower drill pipe and insert into the bowl provided for it.

Function of a Plant Weldery In Maintaining Equipment

THIS is a description of how a welding service operates in the marketing and distributing organization of a major oil company.*

We have, as a field for welding service, the following: Ocean tankers, tanks and pipe lines at ocean terminals, tank-car loading racks, truck-fill stands, tank cars, automotive equipment, pump houses and pumps, tank and pipe lines at smaller depots, and service stations.

The welding service cannot attempt to do all of the welding which originates in these nine groups. For major repairs tankers are sent to shipyards and tank cars to railroad shops, where the work is done by specialists. Tanks are fabricated by the manufacturers, either in the shop or on the site, depending on the size of the tanks. The tank builders have their own fully equipped welding crews. The construction of an arc-welded pipe line of any considerable length is quite likely to be let to a contractor.

But the welding service can and does take care of minor repairs to tankers, to tank cars and to automotive equipment. It does a great deal of work on tanks, such as repairing leaks, installing ladders and stairways (Fig. 1), platforms and railings, additional openings and foam systems. Much work is also done on pipe lines at the bulk depots, such as welded manifolds, welded joints, connections and bends, and even welded pipe supports. Fill stands (Fig. 2), and tank-car loading racks may be partly or completely welded. Service stations are equipped with welded sign poles, floodlight poles and flag poles.

How the Engineering Is Handled

Welding is a function of the engineering department, which in turn is grouped under operations. The chief of the department is the engineering manager, a head-office executive with a staff, not the least important of whom is the field engineer whose principal though not only duty is that of laying out and supervising, anywhere in the company's territory, all welding work which is important enough to require special attention. This field engineer is the company's welding expert, the actual head of the welding service. He spends practically all of his time in the field with his crew, handling new construction and major repairs and installations.

In each division there is a division engineer who has direct charge of all work not of sufficient importance to require the services of the head-office expert. The division engineers, like the head-office engineer, has charge of general construction and maintenance, so that welding is only a part of his responsibility.

Welding is used because it is by far the best and most economical method of doing most of the jobs that arise. As the work consists largely of repairs, changes or additions to existing plant it is convenient to have a method of doing it right on the spot, with the aid of a cutting torch, reducing the shop work or eliminating it entirely. Welding equipment is simpler than any other type of equipment that would accomplish the same work.

Welding is particularly useful in repairing tanks. It is obvious that work can be done from the outside of the tank whereas riveting could not be done without working also from the inside, necessitating emptying and cleaning the tank before starting. Welding reduces the amount of material and labor used. There are almost no design costs, the preparation of the parts is relatively simple, and the resulting work neater and lighter in weight than that made by any other method.

In the case of pipe lines, cutting the threads on a screwed joint reduces the strength of the line 50 per cent and results in a potential leak. Welding maintains full strength of the pipe section, thus allowing lighter pipe to be used, and eliminates leaks. Welding also allows odd angles to be made in pipe lines. A welded manifold means a neat dry pump house and no loss of product. Tight pipes result in a smaller fire hazard and lower insurance. Only when there are to be frequent changes in the manifolding, due to switching of products to be pumped, is a flanged or screwed manifold warranted in an oil pump house, and even then a considerable portion of the piping could be welded without losing desired flexibility. Cracked pump casings can be repaired only by welding.

When the field engineer is in direct charge of his crew he lays out and supervises the work under his authority. When sketches are needed he either makes them up himself or has them made up in the head office or division drafting rooms. Most of the work requires no sketches.

In the divisions, however, the division engineer does not necessarily lay out and supervise all of the welding. In some cases the maintenance foreman or the automative foreman may have welding done, and either man is competent to pass on the completed work.

Methods of Inspection

There is only one type of inspection used, that of observing the weld while it is being made, or shortly after. There are no inspectors other than the engineers or their construction foremen. Instead of training inspectors, the aim of the engineers is to train welders. They believe that an intelligent welder properly trained and interested in his art will be just as much interested in turning out a high-class job as will the most conscientious inspector. So the welders are encouraged to study the beads.

"Studying the beads" includes the observation of the burnoff of the electrode, the appearance of the crater and of the bead itself, and the sound of the arc. The engineers see to it that the proper equipment is available and that the welders have opportunity to experiment, under their watchful eyes, incidently learning considerable themselves at the same time. The method used in these investigations is the time-honored one of varying one condition at a time while all other conditions are kept constant.

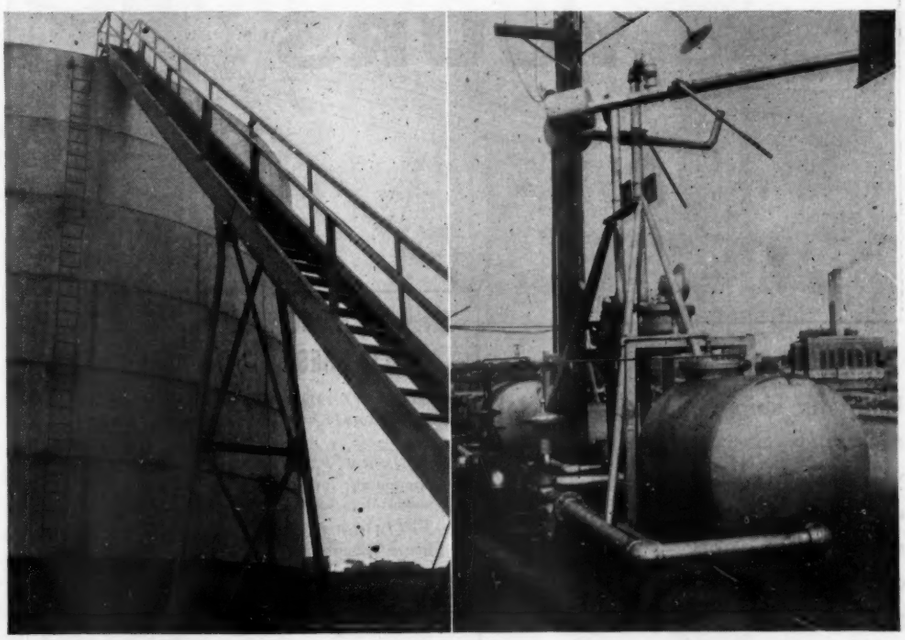


Fig. 1 (left)—This stairway has welded hand rails and the channels were welded together at the joint on the flanges to allow erection in one piece. Fig. 2 (right)—Fill stand and air eliminator fabricated by plant welders

*Data and illustrations from a study submitted to the James F. Lincoln Arc Welding Foundation by Alfred A. Burns, division engineer, Shell Union Oil Corp., Boston, Mass., in a recent program. In its current $200,000 industrial progress program, which closes June 1, 1942, the foundation is offering 458 awards from $100 to $13,700, for reports of advances and improvements made by application of arc welding in design, manufacture, fabrication, construction and maintenance.

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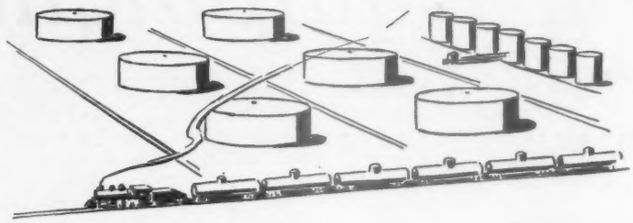

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When the company entered the territory in the late 1920's it took over by purchase several small independent oil-marketing companies and with them considerable tankage.

In the early days when the fuel oils were not so well refined as they now are, they contained among other ingredients more or less free sulfur, especially in that grade of oil classed as No. 2. The sulfur combined with the water thus is almost always present in the bottoms of the tanks to form sulfuric acid, which, over a period of years ate holes in the bottom plates.

Consequently, after some time had passed, the stock losses in a number of old tanks used for the storage of No. 2 fuel oil became appreciable. One of these larger tanks was emptied and given the usual cleaning. Air at 2 or 3 lb. pressure was introduced under the tank by banking up around the outside with several inches of compacted clay. A soap-and-water test of the riveted seams in the bottom plates revealed no leaks. However, the oil-saturated ground under the tank showed plainly that the tank leaked badly.

Better interior lighting was obtained and a section of the bottom was scrubbed with a wire brush, using kerosene as a solvent. Pitting of the bottom plates was now revealed, small holes which had filled with hardened sludge when the tank was cleaned and dried out. A number of these pittings went right through the plates, enough to account for the stock losses sustained.

The entire tank bottom was thoroughly cleaned then and the pitting exposed. Arc welding offered the only practicable, economic method of repair. Each pit, some 2,000 in all, was scrubbed and then welded, and the tank made as good as new at a cost of less than one-tenth the cost of a new tank and of about one-fifth the cost of replacing the bottom plates with new ones.

Emergency Repair on Large Tank

An 80,000-bbl. tank at an ocean terminal, filled with kerosene, developed a serious leak at the junction of two side plates in the lowest ring just above the bottom of the tank.

The management favored the sending of a tanker at a cost of $4,000 to take the product out of the tank. The field engineer prevailed upon his superiors to allow him to repair the leak without removing the kerosene. The liquid was spurting out under considerable pressure and the danger of fire was great.

The engineer secured two ¾-in. steel plates, 12 in. wide by 10 in. long. One of these patch plates was heated evenly over its entire length and was then placed against the tank over the top half of the break and held by two jacks.

The fire-extinguishing system was brought into play and the oil-saturated ground was covered with foam. With two welders working, one at each end of the plate, a quick tack weld was made, followed immediately by the complete vertical welding of the 12-in. ends against the tank plates. The welders then started welding horizontally at both top and bottom of the patch plate, working towards the break. As the plate cooled the break closed due to the contraction of the patch.

The second plate was put in place directly below the first, and the process repeated. The temperature of the second plate was kept lower than that of the first, as the break was by this time fairly well closed.

By having the patch plates 10 ft. long, the welders could start 5 ft. from the break and thus keep out of way of spurting kerosene. Asbestos suits were worn by the welders as a further precaution. The Foamite smothered the sparks as they fell. The total cost of the repairs amounted to less than $200 and considerable product was saved by the rapidity with which work was done.

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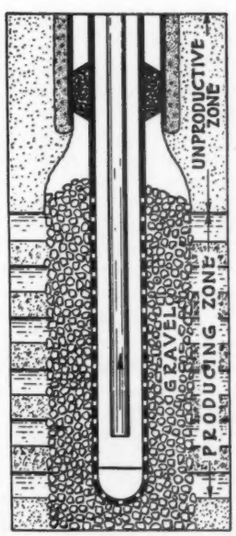
Gravel Packing by Circulation

OIL PRODUCTION from unconsolidated and fine sands presents certain difficulties, including sand cutting of screens or perforated liners, the sanding up of flowing wells, and inordinate wear on pumping equipment due to the abrasive action of the sand carried by the oil.

Producers who face this problem will find that gravel packing by circulation offers protection with many practical advantages.

Only by this method can the thickness and character of the gravel pack be varied to match the character of the sand and oil encountered. The gravel pack, through its contact with the sand, holds it in place and prevents its movement.

No lower cost method as fully effective has as yet been devised. The need for expensive screens and liners is eliminated. If ever necessary, the ordinary perforated liner used in this method could readily and easily be extracted and replaced.



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QUESTIONS ON TECHNOLOGY

By W. L. NELSON, TECHNICAL EDITOR

Protection of Oil Fields From Fire

We are preparing an examination for petroleum field fire-prevention inspectors under the Civil Service Commission, and would appreciate information on printed pamphlets, miscellaneous material or books that pertain to this subject.—C. J. H.

The source of oil-field fires is limited almost entirely to men on the premises who by carelessness or by intent (sabotage) set fire to exposed oil or gas. Thus, the problem of fire prevention resolves itself into a policy of the activities of all persons in the vicinity of oil properties. The fact that oil-field properties are scattered over wide areas that total several thousand square miles makes it necessary to depend upon the oil-company employes and land tenants as the real protectors of oil fields unless an emergency justifies the entrance of armed forces into the field. The only other common sources of fires appear to be lightning and forest fires. There is no way to always stop the effect of a lightning strike and it would seem that forest fires should be halted at some distance from oil properties.

It should be borne in mind that the starting of oil-field fires is usually difficult to accomplish. The oil and gas is normally confined in steel equipment and barring leaks or accumulations of oily debris which could be ignited, there would be no way to start a fire except by deliberate destruction of metal equipment. The danger of fire by accident thus resolves itself into the proposition of preventing the exposure of oil or gas to the atmosphere. Items which are watched by some companies are:

1. Strength of lines, valves, vessels, etc.—use A.P.I.-specification tanks.
2. Thinning of steel in pipe lines, tanks, etc., by corrosion.
3. Immediate cleanup of spills and burning of debris.
4. Check on the packing of valves for leaks.
5. Dikes around tanks and large containers.
6. Installation of buried automatic cutoff valves in case the flow line is opened by any circumstance.
7. Housing of control valves, etc., under lock and key, either underground or in strongly built sheds.
8. Clearing away of brush and tall grass.
9. Use of nonsparking tools when handling exposed oils.
10. Spacing of wells at a safe distance from one another and from boilers, gas engines, flares, etc.
11. Blowout-prevention devices during drilling.
12. Elimination of wooden structures.
13. Adequate breather valves (palate type) to avoid rupture of tanks.
14. Explosion-resistant electrical equipment in some instances.
15. Discouragement of tobacco smoking.
16. Avoidance of town-lot drilling.
17. Caution signs near drips at low points in gas lines.

From the standpoint of incendiaries or sabotage, little can be done except to check the operating personnel and provide armed guards. The damage that may be done to exposed motors and mechanical equipment is of far greater concern to oil operators and the public than the danger of fire. As an illustration of devices that may be useful with regard to such damage, a small plug has been developed which may be screwed into the bearing of a motor or engine. The end of the plug is filled with fusible alloy so that should the bearing become hot by friction (or sand) the alloy melts and completes an electric circuit by which the motor is turned off.

The simplicity and common-sense nature of the precautions that may be taken in preventing fire, accounts for the fact that no books and few pamphlets have been published about this particular subject. The most useful source of information would be discussions with the various safety engineers, fire marshalls, field superintendents, field operators, etc., of oil companies. Doubtless, the American Petroleum Institute, Safety Division, 50 West Fiftieth Street, New York; the National Fire Protection Association, 60 Batterymarch Street, Boston, Mass., and the petroleum section of the National Safety Congress would be glad to cooperate in every way.

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Use of Steam in Reaction Chambers

I have heard of refiners mixing superheated steam with the hot-oil vapors just as they enter the reaction chamber. Of what advantage is this? Does the steam reduce the formation of coke in the reaction chamber? —G. P. H.

The use of process steam in any part of a cracking plant is considered as poor practice. Although it is true that many operators are using steam, it is also true that many disastrous explosions and fires have occurred in cracking plants because of the use of steam. Even when wisely used and in such a way that the accumulation of liquid water is theoretically impossible, there have been accumulations of water. When such water suddenly becomes mixed with hot oil or is unknowingly injected into the system, it vaporizes so rapidly that explosion must occur. In one instance water accumulated in the recycle stock tank and when pumped into the system caused an explosion that killed all people within 200 ft. and injured others at a distance of 300 ft.

Finally, the Fleming process which was used many years ago was discontinued primarily because in many instances water accumulated in the bottom of the still or reaction chamber, or was unknowingly introduced into the chamber. This occurred in spite of the fact that the reaction chamber was held at a temperature exceeding 700° F., or at a temperature well above the boiling point of water at the existing pressure. In these stills the bottom of the reaction chamber was heated only by flue gas.

Effect on Steam

When steam is introduced into a reaction chamber which is so connected that vapor passes out at the top and liquid passes out at the bottom, the effect of steam is to distill additional material from the stock in the reaction chamber. Thus, in most cases it results in an increased coke formation because of the increased concentration of cracked fuel-oil constituents in the reaction chamber. Such is the usual result in plants which are already operating at the normal condition which might be called the point of incipient coke formation. If, however, the operation is not already being pushed to the very point of coke formation, the use of steam is advantageous—but would not increase the yield greatly over what can be accomplished by better plant operation without steam. The mixing effect produced by steam is normally of little significance.

In an increasingly large number of the plants that still utilize reaction chambers, the reaction chamber is so connected that the feed comes into the top and both the vapor and liquid products of the chamber are withdrawn at the bottom being delivered immediately to an evaporator or vaporizer tower for the separation of cracked fuel oil. In such a chamber the use of steam would not cause the formation of coke and in fact would suppress coke formation in the reaction chamber because it would cause a more rapid removal of the liquid from the chamber. It does, however, promote the formation of coke in the evaporator and would necessitate the use of a very low level in the evaporator vessel. The use of the low level (10-15 in.) in the evaporator is always good practice because it permits the use of a higher temperature (or the use of steam) and thus decreases the yield of fuel oil or increases the yield of gasoline.

The use of steam is not the most common practice. This situation has resulted because of the definitely minor improvements, if any, accomplished by the use of steam and because of the danger of explosions.

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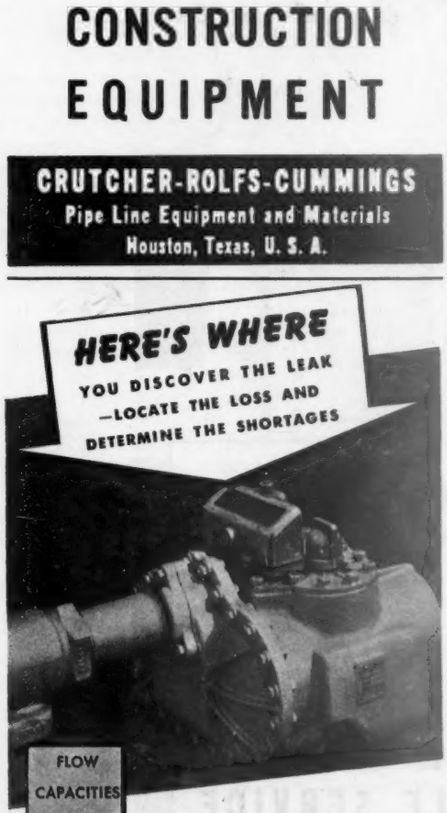

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Pipe-Line Activity

Contracts Signed for Plantation Line

ATLANTA, Ga.—Contracts for construction of an 800-mile main gasoline pipe line from Baton Rouge, La., to Greensboro, N. C., and 200 miles of lateral lines from Bremen, Ga., to Chattanooga and Knoxville (see map, The Oil and Gas Journal, May 22, 1941, p. 45) were awarded by the board of directors of the Plantation Pipe Line Co.

Four separate contract awards totaling $3,500,000 were made, and the directors in a statement said the schedule calls for construction to start on or about August 1, with completion of the main line set for December 31 this year.

Definite points of actual construction have not been determined, according to the statement, and location of terminal and pumping station sites will be announced later.

The Oklahoma Contracting Co. of Dallas was awarded a section of the main line from the Mississippi-Alabama state line to the Alabama-Georgia state line.

Williams Brothers of Tulsa received the contract for main-line construction from the Alabama-Georgia state line to Greensboro, the terminus. In addition, Williams Brothers were given the contract for construction of lateral lines from Bremen to Chattanooga and Knoxville.

Revised Plans for Ventura-Los Angeles Line Approved

LOS ANGELES, Calif.—Franchise for the Shell Oil Co., Inc., oil pipe line running through the western part of the city, once refused, has finally been granted by the city council after reconsideration.

Last month the measure was defeated, as councilmen objected that its construction would damage major highways, including Sepulveda Boulevard.

Stephen W. Cunningham, former councilman, appeared before his colleagues in explanation of the measure and presented a revised route which follows private rights-of-way or lesser streets through much of the distance.

Bell to Build Pipe Line Out of Fargo, Tex., Pool

VERNON, Tex.—Bell Western Pipe Line Co., a subsidiary of Bell Oil & Gas Co. of Tulsa, will begin construction by August 1 on a 35-mile 4-in. and 6-in. pipe line from the four-pay Fargo pool of northern Wilbarger County, North Texas, to Bell's refinery at Grandfield, southern Oklahoma.

Socony-Vacuum and Standard Of Indiana Lines Completed

Progress on two gasoline lines in the Nebraska-Iowa-South Dakota area was rapid as Jones & Brooks, contractors of Oklahoma City, Okla., announced completion of sections of lines for Standard Oil Co. of Indiana and Socony-Vacuum Oil Co., Inc.

Eighty-five miles of the Standard Oil Co. line from Sioux City, Iowa, to Sioux Falls, S. D., the north section of a line from Council Bluffs, Iowa, to Sioux Falls, was completed by the contractors in 46 days and turned over to the company late in June.

The Socony-Vacuum line, which started at the Missouri River near Sioux City, was to be completed to the Omaha, Neb., terminal this week. The same crew that constructed this section will move to Onawa and Whiting, Iowa, to proceed with the Socony-Vacuum job north.

Looping and Compressor Program Planned Near Clifton, Kans.

Work is expected to get under way soon on an expansion program both north and south of Clifton, Kans., planned by the Northern Natural Gas Co. The program calls for the laying of a loop south of Clifton and for the extension of the present loop north of the Clifton compressor station. Only 26 miles of 24-in. line will be laid immediately, but the program calls for a total of 53 miles of line. Ray Smith has the contract. At Hooper, Neb., the company is installing compressor units totaling 1,600 hp. Compressor installations will also be made at Bushton, Kans. (1,300 hp.), and Mullinville, Kans. (1,300 hp.).

Zionsville, Ind., Refinery to Be Connected With Illinois Pipe Line

Sheehan Pipe Line Construction Co. is completing 20 miles of 6-in. crude-oil line connecting the main trunk line of Illinois Pipe Line Co. at the Jamestown, Ind., station with the refinery of Rock Island Refining Co. at Zionsville, Ind. This plant is scheduled to go on stream September 1. Construction of the line is under the supervision of Illinois Pipe Line Co. which will maintain the line in service. The line is owned by Rock Island Refining Co.

Progress Reported on Kansas-Nebraska Gas Pipe Lines

Kansas-Nebraska Natural Gas Co., Inc., will turn gas into the distribution system of Oakley, Kans., this week. The 8-in. main line which the company is constructing from a point near Scott City, Kans., to Cambridge, Neb., has been completed as far as Colby, Kans. Oakley will be served by this line. The company is engaged in a construction program this summer which will cost $1,000,000. In addition to the Scott City-Cambridge line costing $680,000, the company has four other projects. From Elm Creek, Neb., to Kearney, Neb., 15 miles of 6-in. will replace a smaller line and additional connection will be furnished with Nebraska Natural Gas Co., costing $55,000. Approximately 50 miles of small lateral and tap lines to serve additional towns will cost $50,000. Distribution systems will be built costing $125,000.

United to Build 140 Miles of Pipe Line Along Gulf Coast

To supply the increasing demands of national-defense industries in lower Louisiana and along the Gulf Coast to Pensacola, United Gas Pipe Line Co. will soon start construction on 140 miles of pipe line which will run from the gas fields of southern Louisiana across Lake Pontchartrain and east to a point north of Gulfport, Miss. It is estimated that 56 per cent of the gas carried by this line will be used by companies filling national-defense contracts.

The crossing of Lake Pontchartrain will be the longest water pipe line crossing in the world. A

Pipe-Line Personalities . . . . . Paul Griffin

PAUL GRIFFIN

A career in the pipe-line end of the oil industry that started 32 years ago for Paul Griffin of Tulsa was marked last week with another promotion bringing him to the head of the Oklahoma Pipe Line Co. as president.

Three distinct steps highlight Mr. Griffin's promotions from a clerical job that he accepted with Oklahoma Pipe Line Co. in 1909 to head of the organization. There were, however, the scores of minor promotions, involving no titles but all expanding duties and broadening his grasp of company operating practices and problems.

Twelve years after joining Oklahoma Pipe Line Co., Mr. Griffin was elected to the board of directors and to the office of secretary. Two years later he became treasurer. Election to a vice presidency followed in 1930 but Mr. Griffin continued to serve as treasurer of the company.

Election of Mr. Griffin to the presidency of the pipe-line company came last week after the board accepted the resignation of W. R. Finney who was called to New York in October 1939 to head pipe-line operations of the Standard Oil Co. (New Jersey), parent of the Oklahoma organization.

Bruce Ramsey, director and general superintendent of Oklahoma Pipe Line Co., was elected vice president, taking the place formerly held by Mr. Griffin, except that duties of the president and treasurer will be combined. Mr. Ramsey started work with Oklahoma Pipe Line Co. in 1910 and was employed by the company for various periods until 1920 which marked the beginning of continuous service for the intervening 21 years. Mr. Ramsey began work with the connection gang and rose through various positions of gang pusher, connection foreman, district foreman, superintendent and general superintendent. He was elected to the board in 1938.

single-line crossing will traverse the 25 miles of water from the southwestern bank to Mandeville on the northern shore.

About 5 miles north of Mandeville a 10-in. line will run to a point above Covington where it will feed into the Bogalusa lateral. The main 16-in. line will run east to a point near Gulfport, gradually reducing in size from 16-in. to 12-in. pipe. At Gulfport it will tie in to the existing 12-in. line.

Three crews of engineers have been at work on the surveying of the line. Pipe is being delivered and actual construction is expected to start early in July. The government priority board gave priority to the order for pipe because of the importance of getting additional fuel to national-defense industries along the line.

At various points along its course from lower Louisiana to Lake Ponchartrain the new line will run parallel to the Lirette-New Orleans line which was completed last summer. The latter line was constructed to augment the supply of natural gas to the New Orleans area and provided a market for the natural-gas reserves of the Lake Long, DuLarge, Raceland, and Lirette fields. In addition to these gas reserves the new line will draw from several other fields in that area, adding tremendous reserves to those which United already has available.

June Pipe Line Deliveries In East Show Increase

Eastern oil pipe-line deliveries reached a new high mark for the year in June, according to statistics made public last week showing they totaled 24,873,000 bbl. This was an increase of 2,023,000 bbl. over May and 3,136,000 bbl. over June 1940.

For the first 6 months of this year deliveries aggregated 125,134,000 bbl., an increase of 9,445,000 bbl. over the corresponding period of 1940.

Crude Lines to Tap Illinois And Michigan Discoveries

Sohio Pipe Line Co. announced last week it would build 8 miles of 6-in. crude pipe line from the Wiser Oil Co. discovery well in 27-1n-6e, Wayne County, Illinois, to Boyleston Junction, Illinois. The same company will also connect to the new Reed City pool in Michigan with a 27-mile line which will run east to just south of Freeman, Mich., and another line from the pool to railroad loading racks south of the pool. Pure Transportation Co. will build a line from Reed City to railroad loading racks to the south as will Leonard Pipe Line Co.

Talk of Argentine Line Is Revived in East

Rumors were being revived in the eastern states last week that the Argentine Government was going ahead with plans for construction of some 500 miles of crude pipe line to replace tank-car transportation from the Mendoza-Lunlunta area. The projected line would end at San Lorenzo on the Rio Parana where tankers could take oil for export and distribution along coastal areas. No confirmation of the reports came from Buenos Aires, however.

Kansas Crude Lines to Be Finished by Summer's End

By end of summer the pipe-line situation is going to be cleared in Kansas and the state will have a chance to cash in on a greater market.

Skelly Oil Co. has strung pipe for a 30-mile 6-in. line from the east side of Barton County to the Trapp area in Russell County. White Eagle Oil Co. is promised delivery for pipe this month for a 23½-mile 8-in. loop between the Chase and Wherry pools.

Kaw Pipeline Co. is to get delivery in September for a 37-mile 10-in. line from Chase to Susank. Stanolind Pipe Line Co. has contracted to move 3,000 bbl. daily for Kaw Pipeline from Gorham pool to Raymond, where it will be delivered to Sinclair Prairie.

New Line for Cumberland Pool

Williams Brothers Corp. is laying 45 miles of 6-in. crude-oil line for Pure Transportation Co. between Cumberland and Ada, Okla. Construction will be completed at the end of this month.

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Maybe in normal times reciprocity is a great institution, but these aren't normal times. Today our defense administration expects every industry and every company to turn out just a little better work a little faster and with a little more efficiency. Reciprocity doesn't have any part in such a program. The oil industry, called upon to produce more and more oil, wants the best of equipment in drilling, producing and refining divisions, regardless of whether an order for 5000 quarts of lubricating oil goes with the equipment purchased. Axelson believes in reciprocity and endeavors to spread its business so that friends and customers are remembered. But when Axelson wants to buy products it feels are of superior quality, will do a job better and more economically, the matter of reciprocity is not even considered.

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FIELD DEVELOPMENTS...

HIGHLIGHTS FROM THE WEEK'S NEWS—

During 6 of the past 7 weeks, completions have stood above the 600 mark and during the past week the previous high record of 663 completions was surpassed by a new record for the year of 675. Oil wells were up 40 but gas wells and dry holes were down 12 and 16, respectively.

Most of the week's news was of a routine character but there were outstanding developments in some areas. After activity in Michigan sank to a low level, the Winterfield and Reed City areas provided considerable excitement and the latter pool promises to rank with the state's largest. In Illinois, the decline which had become alarming by the close of last year and continued slowly but steadily through the early part of 1941 was reversed by the discovery of the Benton pool and of new sands and producing areas in White County. Added to these developments, there is a new McClosky discovery in Wayne County and Devonian wells at Louden are showing up better than the first news-provoking discoveries.

The Wilcox play in Louisiana has been receiving much attention of late and the trend finally broadened out so as to merge the northern and southern areas. The limits may now be extended far to the south and the theoretical maximum depth for Wilcox producers may be radically revised as a result of recent discoveries as far south as Calcasieu Parish.

In California, most of the spotlight is normally held by the San Joaquin Valley and Los Angeles Basin fields but the coastal district at present is providing the greatest number of possibilities. With added cost of deep development in the two principal sectors, the numerous structures, often with chances for shallow production, make the intermontane valleys in the coastal district attractive. Important discoveries are increasing this attractiveness and a major play is developing here.

MICHIGAN: A Winterfield well, deepened from the Traverse, made 1,261 bbl. in the Monroe. Several new wells are under way in the Reed City pool (p. 87).

SOUTHWEST TEXAS: East Premont is extended 1 mile west and a new sand found. An attempt is being made to link the Sun and North Rincon fields. Bloomington is extended to the northeast (p. 75).

EAST TEXAS: Leasing and blocking acreage is active and new wildcat tests are planned (p. 67).

NORTH TEXAS: The McKnight pool in Throckmorton County has been extended 1 mile (p. 63).

KANSAS: Norton and Phillips counties, near the Nebraska State line in western Kansas, were in the thick of the Barton arch play after discoveries in both counties. A new pool was opened in Norton County and in Phillips County, where a pool was found last week, a new zone paid off in the Ray pool. Stanolind Oil & Gas Co. was still testing at its Pennsylvania sand discovery in the extreme western part of the state, and in the northeast, in the Forest City basin, the McLouth pool was assuming importance (p. 68).

PENNSYLVANIA: Hazards of drilling through the gas pockets in the brown shale were emphasized when a Beaver County test had its fourth string of tools blown up after the other three had been cemented off and drilled by (p. 88).

LOUISIANA GULF COAST: Far to the south of the known Wilcox production, a wildcat on the Abbie Joe prospect in eastern Calcasieu Parish is being tested following an attempted blowout. If it proves a producer it will greatly extend Wilcox possibilities. Atlantic is trying to open production from a new sand in the Wilcox at Neale (p. 74).

ILLINOIS: A McClosky producer, estimated at 2,500 bbl., opens a new Wayne County pool. In White County, Stokes, Rising Sun and Roland have new pays, the Benoist, Palestine and Tar Springs, respectively. Prospects for Devonian production in Louden look better with a high well showing three breaks in the limes and no water (p. 71).

WEST TEXAS: Gulf is starting a test between the Sand Hills and Sand Hills extension fields in Crane County in an attempt to link up Ordovician production in the two areas. A new test is starting between the Ella Waddell and Dune pools (p. 82).

CALIFORNIA: The second Modelo has been proved productive in the Oak Canyon district of California and another test opens up a new area west of Del Valle. The deep test which may make Rincon a major field is held up through mechanical trouble. The deep test which established Raisin City as an oil field has not been completed as it continues to sand up. Buena Vista Hills' 14,600-ft. test is being plugged back to test higher sands. The extensions at Inglewood and Dominguez are not showing up well, while activity at Wilmington is on the increase through town-lot development of the Ford zone and reconditioning of wells (p. 76).

NEBRASKA: Following discovery of a better pay in the second break in the Hunton at Falls City, Shubert operators drilled and also picked up the new pay (p. 68).

OKLAHOMA: A Prue sand pool is in prospect in Lincoln County and a Cleveland County wildcat is showing oil in the Hunton (p. 64).

ARKANSAS: The new production east of Dorcheat is gas-condensate and further development will probably await a spacing order from the Oil and Gas Commission. McKamie is apparently bounded on the north flank (p. 66).

TEXAS GULF COAST: Eureka is extended to the southwest by a well which found production in a deeper sand. The Maurbro east-extension test is a probable producer (p. 85).

WEST CENTRAL TEXAS: Lower Strawn gas production in an intended test to the Ellenburger near Albany may be saved. A test between Lewis-Steffins and Sandy Ridge, Jones County, has been gaged (p. 63).

WEST VIRGINIA: Development in the Ravenswood and Ripley areas was not promising as some tests found nothing and others got small gas production (p. 88).

WYOMING: Passage of the act authorizing leasing of lands formerly affected by old placer claims is expected to start a drilling campaign on the east end of Lance Creek (p. 86).

COMPLETIONS IN ALL FIELDS . . .

(Week Ended July 12, 1941)

	Oil	Gas	Dry	Total	1941 total comp. to date	1940 total comp. to date
N. Y., Pa., and W. Va.	92	21	7	120	2,881	2,483
Ohio	8	13	14	35	870	678
Kentucky	4	6	2	12	363	259
Indiana	6	1	3	10	256	194
Illinois	50	0	14	64	1,766	1,894
Michigan	8	3	7	18	445	646
Kansas	41	0	7	48	1,044	921
Nebraska	2	0	1	3	51	14
Missouri	0	3	0	3	13	19
Oklahoma	44	2	13	59	753	982
Texas:						
North Central Texas	36	0	30	66	1,536	1,645
West Texas	46	0	6	52	1,097	1,120
Texas Panhandle	9	0	1	10	290	331
East Texas	25	1	7	33	607	337
Texas Gulf Coast	18	0	2	20	571	688
Southwest Texas	25	2	11	38	938	1,115
Total Texas	159	3	57	219	5,039	5,236
North Louisiana	13	1	8	22	329	331
Louisiana Gulf Coast	9	0	1	10	468	570
Total Louisiana	22	1	9	32	797	901
Arkansas	2	1	3	6	101	90
Mississippi and Southeast	7	0	1	8	140	107
Montana	2	0	0	2	125	107
Wyoming	3	0	0	3	71	80
Colorado, Utah	0	0	1	1	20	8
New Mexico	7	1	1	9	252	395
California	20	0	3	23	559	591
Total United States	477	55	143	675	15,546	15,605
Total previous week	437	67	159	663		
Week ended July 13, 1940	404	35	147	586		

Posey County, Indiana, Has Small Cypress Pool Opener

By STAFF CORRESPONDENT

EVANSVILLE, Ind., July 14.—Davis & Martin 1 Harlem-Wolf, Posey County wildcat in SE SE SW 22-7s-15w, proved disappointing last week after swabbing only 3 bbl. of oil and 1 bbl. of water during its latest 6-hour test. Earlier in the week 1 Harlem-Wolf was swabbing at the rate of 1 bbl. of oil an hour after two acid treatments totaling 7,000 gal. in the Levias at 2,795-2,800 ft. However, the test has been placed on pump for a production test.

Another test was started in the Schreiber pool of Posey County last week. At the end of the week Gulf was drilling below surface casing at 1 C. P. Slygh, west offset to Gulf 2 William Schreiber which was completed in the Cypress with an initial production of 54 bbl.

Whisenant & Trenchard's Posey County Cypress sand discovery well, 1 Florence McFaddin, was completed on pump last week. No. 1 McFaddin, SW NW SW 16-6s-14w, is now making 45 bbl. every 11 hours and is being pumped only during the day time.

JASPER COUNTY.—In northern Indiana, a closely watched Trenton wildcat in Jasper County was to be acidized and completed this week. The test, Palmer et al 1 Horton, SE NE NE 1-29n-5w, encountered two lime shows, the latest being reported at 624-30 ft. Hole is bottomed at about 1,000 ft.

INDIANA COMPLETIONS

Wildcats

Elkhart County: Hostetter et al 1 Wolverton, SE SW NE 15-38n-4e, dry at 651 ft.

Jay County: Ellen Burke 2 Outcolp, SW NW SW 24-22n-14e, dry at 210 ft.

Parke County: H. N. Oakley 1 Montgomery, S½ N½ N½ NW 20-14n-8w, dry, old well deepened from 1,606-2,466 ft.

Randolph County: Owen & Stevenson 1 Frasier, NE SE 9-19n-13e, location abandoned.

Fields

S. Burkin, Posey County: Rossi et al 1 Dickhaut, SE SW NW 19-6s-12w, pumped 80 bbl., natural, Cypress 2,356 ft., T.D. 2,389 ft.

E. Calvin, Posey County: Ed S. Holemans 3 Mumford, NE SW NE 32-3s-13w, pumped 17 bbl. oil and 100 bbl. water, pay 2,445-70 ft., T.D. 2,744 ft., P.B. 2,470 ft.

Tide Water 10 Doll, NE NW SE 33-3s-14w, pumped 200 bbl. oil and 10 bbl. water, 2,000 gal. acid 2,858-73 ft., T.D. 2,895 ft.

Continental 8 Kleiderer "A," SW SW NE 33-3s-14w, pumped 45 bbl., natural, pay 1,827-45 ft., T.D. 1,845 ft.

Griffin, Gibson County: Hall-Edwards 36 Maier, NE NW NE 14-3s-14w, dry at 2,994 ft.

S. Griffin, Gibson County: Continental 42 Bozeman, NW NW NW 26-3s-14w, pumped 23 bbl., show oil 2,045-66 ft., 2,489-98 ft., 2,513-21 ft., 2,640-65 ft., T.D. 2,845 ft., P.B. 2,675 ft.

Continental 26 Keck, SE SW SE 27-3s-14w, pumped 35 bbl., 50-qt. shot 2,500-20 ft., T.D. 2,889 ft., P.B. 2,536 ft.

Trenton, Decatur County: Hoosier Pub. Utilities 225 Tichener, NW SE 15-9n-9e, 213,000 cu. ft. gas, 140-qt. shot 870-902 ft., Trenton 863 ft., T.D. 902 ft.

INDIANA DRILLING REPORT

Crawford County: Reece-Dietz et al 1 Esarey, NE NW NE 36-3s-1w, drilling 950 ft.

Daviess County: J. W. Cannon 1 Walker, N½ SE SE NE 5-2n-5w, Glen Dean 468 ft., Cypress 501 ft., show oil 503-11 ft., drilling 540 ft.

Swartzentruber et al 1 Beck, SE SW NE 8-2n-5w, set 10-in. 60 ft., drilling 425 ft.

Hartman et al 1 White, SW NW SW 22-2n-7w, show oil 1,608 ft., 1,647 ft., 1,653 ft., H.F.W. 1,695 ft., drilling 1,855 ft.

Elkhart County: A. W. Downs 1 Garl estate, NE SW SE 11-38n-4e, first report.

M. C. Fletcher 1 Baughn, NE SE SE 13-38n-4e, drilling 1,407 ft.

Gibson County: R. S. Brown 1 Watts, SW SW NW 20-2s-12w, set 16-in. 110 ft., drilling ahead.

Nash Redwine 1 Cooper, SE NE NE 19-3s-14w, set 4¾-in. 2,087 ft., fishing 2,095 ft.

Warren & Bradshaw 1 Reavis, SW NW NE 24-2s-10w, location, first report.

Knox County: Midwest Dev. 1 Schaller, SE SE SE 23-2n-11w, set 8-in. 1,348 ft., Glen Dean 1,451 ft., drilling 1,513 ft.

Posey County: Joe Dawson et al 1 Aldrich, SE SW SE 36-5s-15w, spud.

Rossi et al 1 Seifert, NW NW SE 19-6s-12w, Barlow 2,351-58 ft., Cypress 2,365 ft., T.D. 2,385 ft., may run casing.

Whisenant & Trenchard 1 McFadden, SW NW SW 16-6s-14w, pumped 84 bbl. in 6 hr., testing.

Martin et al 1 Harlem-Wolfe, SE SE SW 22-7s-15w, base Pennsylvanian 1,660 ft., Clore 1,782 ft., Palestine 1,887 ft., Menard 1,997 ft., Waltersburg 2,082 ft., Vienna 2,142 ft., Tar Springs 2,164 ft., Glen Dean 2,255 ft., Hardinsburg 2,378 ft., Barlow 2,482 ft., Cypress 2,531 ft., Renault 2,680 ft., Aux Vases 2,738 ft., Ste. Genevieve 2,780 ft., T.D. 2,957 ft., 20-min. drill-stem test 2,795-2,805 ft., recovered 60 ft. oil and 40 ft. oil-cut mud, good show gas, 5-in. 2,795 ft., waiting on cement.

Rossi et al 1 Sanders, NE SE NW 26-6s-13w, first report, rigging up rotary tools.

Cherry & Kidd et al 1 W. W. Gray, W½ SW SE SW 35-3s-14w, Glen Dean 2,300 ft., fishing 2,722 ft.

Joe Bander et al 1 Allyn, SW SE NE 24-6s-13w, machine, first report.

Cherry & Kidd et al 1 Ford, SE SW NW 34-4s-13w rigging up rotary tools, first report.

Randolph County: Kniff et al 1 Clark, NW NE NW 16-19n-13e, set 8-in. 173 ft., drilling 175 ft.

Unionport Gas 1 Starbuck, SE SE SE 4-19n-13e, first report, rigging up machine.

David Culpepper 1 Lewis, SW SE SW 4-19n-13e, Trenton 1,009 ft., drilling 1,063 ft.

Spencer County: Hedges et al 1 Ebley, SE NW NW 7-7s-7w, set 5-in. 936 ft., drilling 960 ft.

Starke County: J. L. Black et al 1 Kennedy, NW SW NE 26-33n-2w, Trenton 1,108 ft., S.D. 1,115 ft.

Sullivan County: W. J. Reynolds 1 Hyde, SW NE NE 9-8n-10w, drilling 2,180 ft.

SUMMARY OF COMPLETIONS

Indiana

	No.	Bbl.	Footage
Oil wells	6	400	15,587
Gas wells	1	*0.2	902
Dry holes	3	.....	3,855
Total	10	.....	20,344

Ohio

	No.	Bbl.	Footage
Oil wells	9	198	11,998
Gas wells	13	*6.6	35,335
Dry holes	14	.....	32,836
Total	35	.....	80,169
Air input	9	.....	4,193
Recompletion, gas	1	.....	.....

Eastern Kentucky

	No.	Bbl.	Footage
Gas wells	6	*3.0	13,608

Western Kentucky

	No.	Bbl.	Footage
Oil wells	4	75	3,465
Dry holes	2	.....	1,254
Total	6	.....	4,719
Input well	1	.....	1,744

*Million cu. ft.

OHIO

ZANESVILLE, Ohio, July 14.—Muskingum County continues active in gas development. Perry County reports a 150-bbl. oil completion. Harrison County Clinton test was plugged at 6,004 ft. Clinton sand was dry. Shale test in Meigs County is a disappointment.

Two deep Clinton tests have been staked in Harrison County, Washington Township, Section 33, offsetting the 500,000-cu. ft. gasser completed a month ago by the East Ohio Gas Co. They are the East Ohio Gas Co. 1 Amasa Phillips and the Ohio Oil Co. 1 James T. Phillips.

Ashland County

Jackson Township: Ohio Fuel 1 Millar Buchannan, Sec. 16, dry, Clinton, T.D. 2,975 ft.

Athens County

Rome Township: G. & K. Oil 2 W. Vandyke, Sec. 30, 500,000 cu. ft. gas, Keener, T.D. 983 ft.

B. Johnson 1 Anna Snow, Lot 34, 760,000 cu. ft. gas, Maxon, T.D. 865 ft. (correction).

Mathews Oil 5 John Featherstone, Sec. 16, 50,000 cu. ft. gas, No. 6 coal, T.D. 556 ft.

Wickens 4 Frank Jackson, Sec. 17, dry, Maxon (water), T.D. 860 ft.

Belmont County

Union Township: Barnesville Dev. 1 John Wilson, Sec. 26, dry, Keener (water), T.D. 1,162 ft.

Cuyahoga County

Brooklyn Heights, Cleveland: Crucible Steel Castings 1 fee, dry, Clinton, T.D. 2,808 ft.

Gallia County

Addison Township: C. A. Cody 1 N. Haskins, Sec. 13, 90,000 cu. ft. gas, shot, second Berea, T.D. 1,690 ft.

Guernsey County

Londonderry Township: Dave Ferguson 1 J. E. Milliken, Sec. 33, dry, Berea, T.D. 1,380 ft.

Harrison County

Stock Township: East Ohio Gas Co. 1 Joel Cramblett, Sec. 22, dry, Clinton 5,827-5,949 ft., T.D. 6,004 ft.

Hocking County

Ward Township: Preston Oil Co. 1774 Sunday Creek Coal Co., NW Sec. 16, dry, Clinton sand, T.D. 3,667 ft.

Knox County

Howard Township: Knox Exploration Co. 1 Charles Workman, Sec. 1, 90,000 cu. ft. gas, Clinton sand, T.D. 2,760 ft.

Jackson Township: Preston Oil Co. 1 Roy Earlywine, Sec. 7, 40 bbl. with small amount gas, Clinton sand, T.D. 2,957 ft.

Preston Oil 1 J. C. Earlywine, Sec. 7, 60 bbl., shot Clinton, T.D. 2,970 ft.

Ohio Fuel Gas Co. 2 Eda Miller, SE Sec. 18, dry, Clinton sand, T.D. 2,875 ft.

Lawrence County

Union Township: Ohio Fuel 1 James Rich, Sec. 9, 100,000 cu. ft., shot, Ohio shale, T.D. 2,930 ft.

Licking County

Franklin Township: Vermillion Oil Co. 1 fee, second Quarter, dry, Clinton, T.D. 2,957 ft.

Wayne Moore et al 1 E. O. Vermillion, Sec. 9, dry, Clinton sand, T.D. 2,840 ft.

Neuton Township: Allen Willey 4 Levi Lynn, fourth Quarter, 1,250,000 cu. ft. gas, Clinton, T.D. 2,605 ft.

Perry Township: George Locknett 1 Sam Wince, 20,000 cu. ft. gas, Berea, T.D 740 ft.

Medina County

Chatham Township: Preston Oil 1 Charles E. Young, Lot 1, 15 bbl., shot, Berea, T.D. 513 ft.

Preston Oil 1 Gert Packard, Lot 8, dry, Berea, T.D. 332 ft.

Thornton Producing Co. 1 A. M. Buchanan, Tract 15, Lot 59, 1 bbl., Berea, T.D. 519 ft.

Thornton Producing Co. O1 Daniel Ross et al, Tract 13, Lot 7, input, Berea, T.D. 934 ft.

Thornton Producing Co. O2 Daniel Ross, input, Berea, T.D. 450 ft.

Thornton Producing Co. O2 Daniel Ross, input, Berea, T.D. 446 ft.

Thornton Producing Co. O9 Daniel Ross, input, Berea, T.D. 446 ft.

Thornton Producing Co. O11 Daniel Ross, input, Berea, T.D. 441 ft.

Thornton Producing Co. O12 Daniel Ross, input, Berea, T.D. 454 ft.

Thornton Producing Co. O17 Daniel Ross, input, Berea, T.D. 421 ft.

Thornton Producing Co. O19 Daniel Ross, dry, Berea, T.D. 441 ft.

Granger Township: M. L. Packard et al 1 Lulu Reid, Remson tract, Lot 16, 35 bbl., Berea, T.D. 486 ft.

Meigs County

Lebanon Township: Ray Proffitt 1 C. E. Goodwin, Sec. 27, dry, Ohio shales, T.D. 3,501 ft.

Monroe County

Betchel Township: Henning & Hall 1 Stella Smith, Sec. 29, 620,000 cu. ft. gas, second Cow Run, T.D. 1,184 ft.

Graham Oil Co. 2 P. Adams, Sec. 30, 70,000 cu. ft. gas, Injun, (Berea dry), T.D. 2,076 ft.

Muskingum County

Brush Creek Township: Industrial Gas 2 C. F. Bailey, Sec. 15, 1,150,000 cu. ft gas, Clinton, T.D. 4,071 ft.

Harrison Township: Ohio Fuel 1 Carl Staker, Sec. 2, 500,000 cu. ft. gas, Clinton shot, T.D. 4,195 ft.

Industrial Gas 1 Charles Twyman, Sec. 2, 1,600,000 cu. ft., Clinton, T.D. 4,236 ft.

Wayne Township: Franklin Drlg. 2 C. B. Saunders. 400,000 cu. ft. gas, shot, Clinton, T.D. 4,190 ft.

Ohio Fuel 1 Lynn Morrison, Sec. 8, 400,000 cu. ft. gas, Medina, T.D. 4,040 ft.

Perry County

Clayton Township: B. G. Davis et al 7 Mrs. C. A. Beacham, NW Sec. 16, 40 bbl. and 100,000 cu. ft. gas, Clinton sand, T.D. 3,279 ft.

Monroe Township: C. Z. Ruth 27 North West Coal Co., NE Sec. 22, dry, Berea, T.D. 1,062 ft.

Washington County

Aurelius Township: William Atkinson 1 fee, dry, stray (water), T.D. 350 ft.

Barlow Township: Baker 1 E. F. Green, Sec. 10, 470,000 cu. ft. gas, Keener, T.D. 1,321 ft. (old gas well deepened).

Warren Township: Henderson Oil 46 D. D. Scott, Sec. 8, 3 bbl., shot, first Cow Run, T.D. 644 ft.

Henderson Oil 47 D. D. Scott, Sec. 8, air input well, T.D. 660 ft.

Henderson Oil 48 D. D. Scott, Sec. 8, 4 bbl., first Cow Run, shot, T.D. 640 ft.

Wayne County

Plain Township: Max Johnson et al 1 D. Finney, Sec. 30, dry, Clinton, T.D. 3,010 ft.

EASTERN KENTUCKY

ASHLAND, Ky., July 14.—Six gas wells were completed in eastern Kentucky this week with the wells making a combined daily production of 3,012,000 cu. ft. of gas.

The Kentucky-West Virginia Gas Co. has made nine new locations in Floyd, Knott, and Pike counties. This firm has 37 operations under way and with the new locations being prepared will start work on them as soon as possible. The company announced a 90-well program last spring and has been expanding operations during the past few months.

The Kentucky-West Virginia Gas Co. reported the completion of the six gas wells as follows:

No. 5298 Wilburn Farmer, in Pike County, 1,555 ft., Maxon, 1,107,000 cu. ft. gas, R.P. 478 lb.

(Continued on Page 75)

McKnight Pool Extended One Mile to Northwest

By R. MARNE SANFORD

WICHITA FALLS, Tex., July 14.—A 1-mile northwest extension to a pool-opener completed by Humble the latter part of March 1941 is indicated in a wildcat being tested by Helmerich & Payne in Throckmorton County. The test cored 36 ft. of saturation in the Caddo lime from 4,190 to 4,226 ft. No. 1 Mrs. W. D. Howsley is located in the southeast corner of Section 300, B.B.B.&C. Survey. Casing has been set at 4,190 ft. and at last reports preparations were being made for attempting completion.

Humble's discovery, 1 Mrs. A. D. McKnight, was completed for a daily potential of 1,488 bbl. from 31 ft. of saturated lime section. At the time of its completion, operators thought that the well was on top of a large structure and this new project seems to bear out that contention.

About 15 years ago Humble erected a $400,000 natural-gasoline plant for an old Caddo lime pool in the area. Pressures in the field dropped and the plant received very little oil from the area. However, the discovery together with Helmerich & Payne 1 Howsley and other wells, which should be drilled in the intervening area, are expected to be able to supply the plant with sufficient natural gas.

SUMMARY OF COMPLETIONS

North Texas

	No.	Bbl.	Footage
Oil: Bryson	2	107	6,389
Hull-Silk	3	790	9,941
K.M.A.	4	1,200	17,025
Olney	3	130	2,471
Other fields	5	885	15,750
Miscellaneous fields	14	1,278	24,352
Wildcats	1	60	2,701
Dry: Olney	5	.....	4,618
Other fields	2	.....	7,210
Miscellaneous field	8	.....	8,494
Wildcats	4	.....	6,419
Total	47	.....	105,370

West Central Texas

	No.	Bbl.	Footage
Oil: Fields	7	1,014	15,607
Wildcats	1	71	2,019
Dry: Fields	4	.....	8,542
Miscellaneous fields	1	.....	830
Wildcats	6	.....	15,696
Total	19	.....	42,694

Mississippian Production For Young County

After running several squeeze jobs on first holes from which oil and water were obtained, T. D. Humphrey appears to have been successful in shutting off water at 1 E. G. Williamson, Section 601, T.E.&L. Survey. Located 10 miles northwest of Graham, in Young County, the wildcat has been drilled out to 5,039 ft. and perforated from 5,000 to 5,035 ft. with 140 shots. Operator acidized the well with 3,000 gal. after which it flowed steadily, making 46-gravity oil. The flow was estimated at 65 bbl. an hour but will probably not show that strong on official gage.

Three Wildcats Staked

Three wildcats were reported staked in the district during the week. Two were located in Montague and 1 in Clay County. Seitz, Comegys & Seitz have staked 1 J. B. Dunn in the extreme northeastern part of Clay County, 5 miles northeast of Byers. The wildcat, contracted to 2,500 ft., is 330 ft. from the north line and 1,100 ft. from the Red River on a 126.6-acre lease in the R. R. Brown Survey.

Benson Bros., who recently opened a deep conglomerate pool 2 miles southeast of the Ringgold pool in northwest Montague County, have staked a new wildcat 2 miles north of their discovery well. The test is 1 J. J. Lowery, 330 ft. from the north and east lines of 65.8-acre tract in Block 72, Abel Beason Survey.

In the same county, in the extreme northeast corner, Shell Oil Co., Inc., was building derrick for 1 Alice Thomas, Block 95, Kaufman County School Land Survey. The test is contracted to 5,000 ft.

Second Producer for Clay County's Coleman Pool

The second oil producer for the Coleman pool, 6 miles southeast of Henrietta, in Clay County, was completed as the week ended. Shell 1 Mary Anderson, an east offset to shell's discovery, 1 Coleman, flowed 153 bbl. of oil in 3 hours from the Mississippian lime section at 6,151-6,275 ft., or at an estimated rate of 1,244 bbl. daily on official Railroad Commission gage.

Cooke County Discovery Gaged

In northeastern Cooke County, 2½ miles northeast of the Anderson & Kerr pool, the Harvey Drilling Co. 1 Ware, W. W. Crisp Survey, has been completed. On official Railroad Commission gage the test pumped 77.55 bbl. of oil in 15 hours from the Strawn sand at 2,215 to 2,227 ft., to open the new pool.

NORTH TEXAS COMPLETIONS

Wildcats

Archer County: Carroll C. Robertson 1 A. Winters, 450 ft. from S and 1,255 ft. from E lines Sec. 80, Blk. 4, Clark & Plumb Sur., dry at 1,030 ft.
Stayley Oil Heydrick 1 E. W. Donahue, A. Edwards Sur. A-124, dry at 1,456 ft.
Jack County: W. H. Carter 1 L. W. Carney, John D. Rogers Sur. A-501, dry at 3,370 ft.
Young County: W. A. Buttram and Jerry B. Newby 1 Ferguson, S. Tynes Sur. A-274, dry at 563 ft.
Wrightsman Oil 1 Gilmore, 2,107 ft. from NE and 1,960 ft. from SE lines Sec. 3, B.B.B.&C. Sur., 2,600-ft. rotary test, pumped 82 bbl. in 24 hr. after 15-qt. shot 2,482-91 ft., est. 60 bbl. daily, P.B. from 2,701 ft.

Fields

Antelope, Clay County: Shell 18 Henderson, 216 bbl. in 8 hr., 2-in. casing outlet, est. 450 bbl. daily, 3,178-3,215 ft.
Bowers, Montague County: Mudge Oil 3 Custers, 60 bbl. in 12 hr., est. 100 bbl. daily, ¼-in. choke, 60-qt. shot, 2,971-95 ft., 1,000 gal. mud acid, T.D. 3,588 ft., P.B. 3,008 ft., est. 100 bbl. daily.
Bryson, Jack County: Three Bee Investment Co. 2 Armstrong, pumping 100 bbl. in 24 hr., 10-qt. shot 3,144-56 ft., 5-qt. shot 3,272-3,282 ft.
Panhandle Refg. 6 Daniels & Eaton, 7 bbl. in 24 hr., pumping, 30-qt. shot, 3,080-88 ft., T.D. 3,107 ft.
Fargo, Wilbarger County: Humble 2 Anderson, 229 bbl. in 24 hr., pumping, 5,000 gal. acid, 4,484-4,614 ft.
Hull-Silk, Archer County: Guy Brown 1 Perkins "E," pumped 10 bbl. in 24 hr., 1,010-24 ft.
Southern Pet. & Expl., Inc. 12 Moss, 59 bbl. in 3 hr., ¾-in. choke, est. 230 bbl. daily, 4,278-4,303 ft.
R. C. Lipscomb 1 Wilson, 101 bbl. in 2 hr., open tubing, est. 550 bbl. daily, 4,610-14 ft.
K.M.A., Wichita County: Mitchell Oil 3-B Mitchell "B," dry at 1,410 ft.
Cochran & Cain 3 Preston "B," 70 bbl. in 3 hr., ½-in. choke, est. 225 bbl. daily, top Ellenburger 4,420 ft., pay 4,441-4,467 ft.
Lincoln-Moore 3 Bradley, 56 bbl. in 3 hr., ¾-in. choke, est. 225 bbl. daily, 3,000 gal. acid, top K.M.A. 3,650 ft., pay 3,795-3,890 ft.
Consolidated Oil 28 Ferguson, 178 bbl. in 3 hr., ¾-in. choke, 2,000 gal. acid, est. 425 bbl. daily, top Ellenburger 4,209 ft., pay 4,240-4,310 ft.
Fain-McGaha Oil 5 Griffin "B," 83 bbl. in 2 hr., ½-in. choke, est. 325 bbl. daily, top Ellenburger 4,251 ft., K.M.A. 3,654 ft., pay 4,251-4,358 ft.
Nocona, Montague County: J. M. Hawley 7 Bouldin "Crow," pumped 21 bbl. in 24 hr., 801-14 ft.
Olney, Young County: J. G. Wooten 1-A A. J. Cantwell, dry at 596 ft.
F. D. Willis 1 Garvey, dry at 814 ft.
Pemeta Oil 15-B Tatum "B," pumped 5 bbl. in 24 hr., 666-72 ft.
W. F. Palmer 6 Marshall, 42 bbl. in 8 hr., pumping natural, est. 90 bbl. daily, 906-15 ft.
W. F. Palmer 15 Campbell, dry at 1,003 ft.
P. C. Burns 1 Bernheart, dry at 1,068 ft.
L. T. Burns 9 Bloodworth, 35 bbl. in 24 hr., pumping natural, 870-84 ft.
Pet. Prod. 7 Koester, dry at 1,137 ft.
Walnut Bend, Cooke County: Sinclair-Prairie 3 Cox "B," 81 bbl. in 9 hr., pumping natural, perf. casing 4,682-97 ft., est. 185 bbl. daily, T.D. 4,913 ft.
Sinclair Prairie 1 Marshall, dry at 5,800 ft.

Miscellaneous Pools

Archer County: Guy Brown 1 Johnson, pumped 2 bbl. in 24 hr., 1,110-20 ft., P.B. from 2,028 ft.
Jack Storey Jr. 1 Wilson "B," 85 bbl. in 24 hr., flowing, 1,525-34 ft.
Young & Woody Drilling Co. 6 Meade "B," 10 bbl. in 24 hr., pumping 958-65 ft.
Pet. Prod. 9 King, 10 bbl. in 24 hr., pumping, 12-qt. shot, 1,241-59 ft.
Bridwell Oil 1 Bridwell "D," dry at 916 ft.
Bridwell Oil 4 Bridwell "D," dry at 920 ft.
C. T. Hedge 23 Griffin "A," 5 bbl. in 24 hr., pumping, 1,291-1,310 ft.
Clay County: Gorman & Norwood 8 Taylor, dry at 1,157 ft.
Perkins-Cullum 10 Taylor "A," 18 bbl. in 3 hr., pumping natural, est. 85 bbl. daily, 1,047-64 ft.
Sussex Oil 27 Glassgow, 77 bbl. in 24 hr., pumping natural, 1,057-76 ft.
Stayton Oil 9 McGregor, 55 bbl. in 24 hr., pumping natural, 1,176-96 ft.
Cooke County: Frank Hood 16 Parkey, 10 bbl. in 24 hr., pumping natural, 726-31 ft.
Wichita County: Thos. Nix 2 Honaker, dry at 101 ft.
Wood & Duncan 1 Gentry, dry at 1,350 ft.
Akin, Dimock & Costley 10 Dodson "A," dry at 1,350 ft.
Ted Norwood 4 Leissler, dry at 1,350 ft.
Continental Oil 32 Waggoner "A," pumped 4 bbl. in 24 hr., 65-qt. shot, 1,376-1,400 ft., P.B. from 1,506 ft.
Ted Norwood 1 Jackson, dry at 1,350 ft.
Wilbarger County: Consolidated Oil 2 Ancell "B," 18 bbl. oil and 2 bbl. water in 24 hr., pumping, 1,756-68 ft.
Consolidated Oil 4 Ancell, 102 bbl. oil and 40 bbl. water in 24 hr., pumping, 3,000 gal. acid, top Ellenburger 4,306 ft., 4,369-81 ft.
W. T. Waggoner 32 Waggoner "A," 15 bbl. in 24 hr., 10-qt. shot 1,675-1,688 ft., P.B. from 1,699 ft.
Young County: Tex-Tor. Oil 3 Knight "A," 513 bbl. in 12 hr., 1-in. choke, est. 800 bbl. daily, top Caddo 3,798 ft., 3,830-35 ft.

NORTH TEXAS ACTIVE WILDCATS

Archer County: W. B. Hamilton 22 Cartwright, 660 ft. from W and S lines, James Webb Sur. A-664, T.D. 5,211 ft., P.B. to 5,164 ft., installing pumping unit.
Jack E. Kadane 1 A. Schlabs, 330 ft. from N and E lines W 30.38-acre, Lot 48, Blk. 3, Clark & Plumb Sur., 4,100-ft. rotary test, first report.
Ted Norwood 1 Mankins, 2,190 ft. from N and 450 ft. from E lines Sec. 2, S.P. Sur. A-844, 1,850-ft. rotary test, drilling 1,655 ft.
Clay County: Bridwell Oil 1 Myers (old well drilling deeper), Charleton Thompson Sur. A-444, old T.D. 6,065 ft., cleaning out to work over.
Royal Pet. 1 Hatfield, 440 ft. from S and E lines W. G. Glass Sur., 6,000-ft. rotary test, rigging up rotary.
Superior Oil 1 Seigler, 467 ft. from S and E lines W/120-acre, Sec. 3211, T.E.&L. Sur., 5,600-ft. rotary test, rigging up.
C. J. Bohner 1 Wickliff, 330 ft. from S and W NE cor., S/40.45 acres W/80.9 acres of E/182.69 acres of Israel Gable Sur. A-420, set surface pipe, moving in rotary.
Cooke County: Dickson Oil and R. B. George 1 R. B. George, 330 ft. from NE NW E/40-acre R. B. George farm, Jas. Bradshaw Sur. A-29, pits.
Harvey Drilling Co. 1 J. W. and H. P. Ware, 330 ft. from E and 600 ft. from S lines W. W. Crisp Sur. A-221, drilled plug, cleaned out to bottom, filled 2,100 ft. oil in hole in 12 hr., shut in for storage, T.D. 2,227½ ft.
Moss Holmes 1 E. F. Coffee, 1,340 ft. from S and 150 ft. from W lines Z. P. Tipton Sur. A-1608, S.D. 2,523 ft.
Jack County: Alma Oil 1 Maxey, V. W. Maxey Sur., perf. casing 5,278-5,320 ft., filled 5,000 ft. oil in hole in 18 hr., ran 2⅛-in. tubing at 5,346 ft., shut in for storage, T.D. 5,392 ft.
Hill & Hill 1 Kinder, 467 ft. from E and 150 ft. from S lines B.S.&F. Sur. A-2351, 2,300-ft. cable-tool test, drilling 1,940 ft.
F. Kirk Johnson 1 E. J. Shawyer, 660 ft. from S and 520 ft. from E lines NW SE J. Turner Sur. A-609, 5,500-ft. test, drilling 1,990 ft.
O. J. Perrin 1 Brumbelow, 1,045 ft. from S and 720 ft. from E lines, H. C. Ayers Sur. A-4, drilling 4,045 ft.
Montague County: Benson Bros. 1 J. J. Lowrey, 1,878 ft. from W and 1,506 ft. from S lines Sec. 72, A. Beason Sur. A-20, 6,200-ft. rotary test, first report.
Walter Gant 1 Will Laird, 467 ft. from S and E lines SW cor. F. Cook Sur. A-139, but in R. T. Millard Sur. A-470, P.B. to 6,590 ft., testing on pump.
Walter Gant 1 John Turner, 330 ft. from N and E lines Sec. 59, E.T. Sur., drilling 1,290 ft.
Shell Oil 1 Alice Thomas, 1,255 ft. from W and 467 ft. from S lines Sec. 95, Kaufman Co. Sch. Lds. Sur. A-407, 5,000-ft. test, location.
Superior Oil 1 Wilmer Sealy "A," 950 ft. from W and 330 ft. from S lines S. B. Morton Sur. A-1175, 5,700-ft. rotary test, S.D. repairs 400 ft.
Throckmorton County: Helmerich & Payne 1 Housley, 660 ft. from S and E lines Sec. 300, B.B.B.&C. Sur., 4,200-ft. test, drilling 3,820 ft.
Rathke Oil 1 Swagerty, 495 ft. from N and 746 ft. from E lines SW Sec. 258, B.B.B.&C. Sur., 5,000-ft. cable-tool test, drilling 5,175 ft.
Jimmie Rogers 1 Timmons, NW cor. S½ Sec. 2189, T.E.&L. Sur., 4,200-ft. test, S.D. repairs 2,005 ft.
Wichita County: E. C. Harlin and Tom Medders 1 J. B. L. Hansard, 150 ft. from W and 775 ft. from S lines Blk. 38, Specht & McCutcheon subd., H. C. Taylor Sur. A-285, 1,350-ft. rotary test, S.D. 750 ft.
King Oil and Perkins & Cullum 1 Wells, 2,353 ft. from W and 4,230 ft. from N lines Lot 23, J. A. Ventross Sur. A-103, 5,000-ft. test, installing pumping unit, T.D. 4,065 ft.
Northern Drilling Co. 1 J. E. Roller, 1,000 ft. from W and 750 ft. from N lines C.T. Sur. A-438, 450-ft. cable-tool test, spudding.
Young County: W. A. Buttram 1 Ferguson, 768 ft. from N and 150 ft. from E lines L. W. Smith Sur. A-1822, 600-ft. cable-tool test, first report.
Consolidated Oil 1 Dunigan, 467 ft. from S and E lines Sec. 163, T.E.&L. Sur., 5,000-ft. test, flowed small heads of oil and water through casing at 4,949 ft., will deepen.
R. P. Dorian 1 Daniels, 330 ft. from S and W lines

(Continued on Page 83)

Field Work Is At New High For Year; New Pools Showing

By ROBERT INGRAM

FIELD work in Oklahoma last week reached the highest point in a number of years after a steady increase in drilling and workover operations which began early this spring. Tabulations of all operations, including inactive rigs, deepening or plug-back operations, locations and new wells, totaled 560 for the state and completions last week totaled 59 oil wells, gas wells and dry holes. There were also five successful recompletions and four old wells deepened which were later abandoned. That this drilling pace would continue was indicated by the fact that 57 new locations were made during the week.

In spite of the increase in drilling, however, the state was still in need of new oil. Production again took a drop of 19,175 bbl. from the previous week and last week was only 414,100 bbl.

Partly explaining the inability of producers to hold production up was the fact that a large share of the completions are in old areas which might almost be classed as stripper areas and many of the wells drilled in make an initial production of less than 50 bbl. a day. This was true in nearly all fields except the active flush fields of Guthrie, in Logan County; Tecumseh Lake, Pottawatomie County; Cumberland, Marshall and Bryan counties; West Hewitt, Carter County; and Oklahoma City, where a spur in new drilling is taking place.

So far these fields have not developed to the point that they could make any appreciable difference in the state's total production, and wildcatters were still combing all areas for new pay. Considered the biggest bet for future production was the Apache pool in Caddo County where as yet the Texas Co., discoverer of the pool, has been unable to complete its well, which discovered pay in both the Hunton and Simpson Bromide.

New Prue Sand Pool Likely In Lincoln County

Dunnett Oil Co. of Oklahoma City was cleaning out last week at 1 Kuckenbill, SW SE SE 29-15-5, Lincoln County, after a shot of nitroglycerine in the Prue sand at 3,505-50 ft., total depth. The well was flowing by heads every 3 hours and was estimated at 200 bbl. a day to open a new field. The same company was setting surface pipe at 1 Dollison, SW NE NW 33-15-5, on the same lease block.

Cleveland County Wildcats Testing for New Pay

Cleveland County's two wildcat tests were holding attention last week after one of them showed oil on a drill-stem test in the Hunton lime and the other was nearing the Simpson zone.

Luther E. Mayes et al 1 McCommins, NW NE NE 15-10-1, south of Newalla, was drilling at 5,811 ft. after recovering 180 ft. of oil-cut mud and drilling fluid on a drill-stem test in the Hunton at 5,710-28 ft.

At the same time Sinclair-Prairie 1 Craig, NE NE SE 30-8-1w, east of Noble, had the Sylvan shale at 7,160 ft., the Viola at 7,260 ft. and was drilling at 7,295 ft. On the Viola the well checked considerably higher than the Montgomery and Bugher producers in the Noble pool nearby.

OKLAHOMA COMPLETIONS

Wildcats

Sharp 1 Billington ..... NW SE SE 21-9-4
Pumped 270 bbl. oil and 100 bbl. water in 13 hr., Viola lime, perf. 4,500-40 ft., Wilcox 4,642 ft., T.D. 4,648 ft., P.B. 4,597 ft., *opens East Tecumseh pool*, Pottawatomie County.

Shell 1 Keyes-B ..... SW SW NE 22-11-8
Flowed 494 bbl. in 8 hr. through tubing, C.P. 60 lb., T.P. 95 lb., S.I. C.P. 950 lb., est. 4,000,000 cu. ft. gas, Hunton 4,090 ft., T.D. 4,347 ft. in Wilcox, P.B. 4,235 ft., perf. 4,186 ft., 4,060-61 ft., 4,128-50 ft., acid, flowed 109 bbl. in first hr., *pool opener*, Seminole County.

Skelly 4 Robberson-Frensley ..... NE NE 35-1s-5w
Flowed 132 bbl., T.D. 7,808 ft., P.B. 7,580 ft., packer set at 5,169 ft., *opens deep Simpson production in Velma pool*, Stephens County.

Western Oklahoma 1 Ward .... NW SW NW 27-9-24
Gaged 12,000,000 cu. ft. gas, sand 5,210-44 ft., base Wapanucka 5,538 ft., 7-in. 5,795 ft., T.D. 5,795 ft., perf. 5,205-50 ft., *extension to gas area*, Le Flore County.

Mico 1 Lehmer ..... NE SW NW 17-12-8
Dry, T.D. 4,410 ft., Mayes 4,160 ft., Woodford 4,320 ft., Hunton 4,350 ft., Okfuskee County.

Stormfeltz 1 Weimer ..... NW SW NW 16-13-16
Dry, T.D. 2,182 ft., Muskogee County.

Hyde 1-A Pawnee ..... SW SE NW 33-22-5
Dry, T.D. 3,229 ft., Bartlesville 3,155-3,229 ft., P.B. 3,200 ft., swabbed water and rainbow of oil, Pawnee County.

Adams 1 Albright ..... SW SE 31-23-2w
Dry, T.D. 1,345 ft., 6-in. 1,251 ft., Noble County.

Johnson 1 Barrett ..... SW SE NE 14-6s-6w
Dry, T.D. 2,003 ft., water sand 1,920-2,003 ft., Jefferson County.

Fields

Altus, Jackson County: Mathews 1 Vaughn, SE NE NE 9-1-20w, dry, T.D. 1,607 ft.

Bald Hill, Okmulgee County: Price 1-A Flech, NW NW 10-14-14, dry, T.D. 1,227 ft.
Dow 4-A Chatman, NW SE NW 13-14-14, dry, T.D. 1,085 ft., input well.
Swick 1-A Noble, N½ NW SW 22-14-14, old well drilled deeper from 435 ft. to T.D. 1,795 ft., dry.

Beebe, Pontotoc County: Troop 2 Haskins, NW SW SW 26-5-4, dry, T.D. 2,725 ft.

North Beebe, Pottawatomie County: Culver 5 Waite, NW NW SE 9-5-5, pumped 60 bbl. oil, Hunton 2,290 ft., Sylvan 2,508 ft., 5-in. 2,300 ft., T.D. 2,515 ft.

Blackwell, Kay County: National Union 1 Andrews, NE NE 30-28-1, pumped 85 bbl. oil and 50 bbl. water, 6-in. 3,351 ft., Wilcox 3,356-70 ft., shot 3,356-70 ft., T.D. 3,370 ft.

Cement, Caddo County: Ohio 6 Surbeck, NE SW SW 2-5-9w, 18,500,000 cu. ft. gas, 800 lb R.P., sand 4,893-4,919 ft., sandy shale 4,919-45 ft., sand 4,945-56 ft., sandy shale 4,956-71 ft., 5-in. 4,960 ft., perf. 4,893-4,956 ft., T.D. 4,971 ft.
Ohio 9 Lackey, Account 3, NE SE NW 11-5-9w, flowed 983 bbl., Rowe zone 3,287-3,314 ft., 4½-in. 3,340 ft., perf. 3,287-3,314 ft., T.D. 3,360 ft.
Continental 3 Wagoner, NE NW SW 12-5-9w, swabbed and flowed 685 bbl., Wade 3,842 ft., 7-in. 3,847 ft., T.D. 3,936 ft.
Magnolia 9 Niles, NE NW 36-6-10w, old well drilled deeper from 2,723 ft. to T.D. 3,598 ft., sand 3,584 ft., D.S. test 3,586-98 ft., recovered 1,050 ft. salt water, dry.

Cushing, Lincoln County: Kemp 1-A Fairies, NE SE SW 26-17-6, dry, T.D. 2,659 ft., Oswego 2,500-65 ft.

West Earlsboro, Seminole County: Stanolind 1 Dickerson, SE SE SE 23-9-4, flowed 85 bbl., dolomite 4,438-58 ft., 5-in. 4,419 ft., perf. 4,219-34 ft., acid, T.D. 4,458 ft.

Ed Cox, Carter County: Dillingham et al 3 Herrell, NE SW NE 22-2s-2w, pumped 34 bbl. in 12 hr., 6-in. 875 ft., T.D. 1,040 ft.

Fish, Seminole County: Commercial 1 Harris, NW NE SW 5-6-8, dry, T.D. 3,052 ft., Gilcrease 2,977 ft., sand 3,005 ft., sand 3,018 ft., 7-in. 2,414 ft.

Guthrie, Logan County: Continental 2 Donoghue-A, NW NE SW 7-17-1w, flowed 575 bbl. in 19 hr., second Wilcox 5,460-81 ft., 7-in. 5,458 ft., first Wilcox 5,376 ft., T.D. 5,481 ft.
Continental 4 Donoghue, SE NE SW 7-17-1w, flowed 357 bbl. in 6 hr., second Wilcox 5,447-76 ft., T.D. 5,476 ft.
Continental 2 Suits, SW SE NW 7-17-1w, flowed 329 bbl. in 6 hr., second Wilcox 5,486-90 ft., 7-in. 5,485 ft., T.D. 5,490 ft.
Continental 3 Suits, SE SW NW 7-17-1w, flowed 805 bbl. in 24 hr., second Wilcox 5,480-5,503 ft., first Wilcox 5,401 ft., 7-in. 5,478 ft., T.D. 5,503 ft.
Sunray 4 Donoghue, NE NW SE 7-17-1w, flowed 151 bbl. in 2½ hr., second Wilcox 5,420-45 ft., 7-in. 5,416 ft., T.D. 5,445 ft.

Healdton, Carter County: Gilmer 13 Hearnstadt, NE SW NW 3-4s-3w, 28 bbl., spotted sand 900-1,022 ft., T.D. 1,024 ft.
Sun 36 Mullin-B, SE NW SW 3-4s-3w, pumped 37 bbl., sands 775-87 ft. and 882-84 ft., T.D. 1,034 ft.

West Hewitt, Carter County: Daube 7 fee, NW SW SW 17-4s-2w, flowed 46 bbl. in 2 hr. through 1-in. choke on 2-in. tubing, potential 552 bbl., sand 2,095-2,132 ft. and 2,146-2,200 ft., T.D. 2,226 ft., 7-in. 2,095 ft.
Gibson 2 Woodworth, NE SW NW 20-4s-2w, flowed 535 bbl., 7-in. 2,047 ft., perf. 1,945-2,038 ft., T.D. 2,047 ft.
Carter 10 Vorhees, W½ NW SW 21-4s-2w, pumped 238 bbl., water exhausted after 3 days pumping, sand 2,260-2,300 ft., hard limestone 2,300-10 ft., 5-in. 2,260 ft., T.D. 2,310 ft.
West Holdenville, Hughes County: Tri Oil 1-B Breeding, NW NE 12-7-8, pumped 16 bbl., lower Calvin 1,083-97 ft., shot 1,089-97 ft., T.D. 1,097 ft.

Isom Springs, Marshall County: Gill 1 Adams, NE SW NE NE 6-8s-6e, 30 bbl., sand 533 ft., T.D. 538 ft.

Jesse, Pontotoc County: Dennis 1 Pettyjohn, SW SE SW 1-1-7, pumped 10 bbl. oil and 15 bbl. water, sand 910-25 ft., 7-in. 910 ft., T.D. 1,500 ft.

Kellyville, Creek County: Ice 1 Littlehead, SE SE NE 19-17-10, 2½ bbl., broken Red Fork 2,088-2,155 ft., T.D. 2,176 ft., P.B. 676 ft., shot 625-40 ft.
Jackson 1 Davis, NW NW SW 17-18-10, dry, T.D. 2,753 ft., broken sand 2,695-2,705 ft., sand 2,744-53 ft., show gas, H.F.W.

Mission City, Seminole County: Sinclair 1 Townsend, S½ NE SW 6-8-6, old well plugged back from 4,258 ft. to 3,636 ft., dry.

Oklahoma City, Oklahoma County: British American 1 Shields, SE NE NW SW 15-11-3w, pumped 585 bbl., Wilcox 6,423 ft., 8-in. 6,416 ft., shot 6,462-6,518 ft., T.D. 6,518 ft.
Phillips 1 Turner, SW SE NW 34-12-3w, pumped 571 bbl., Wilcox 6,484 ft., 5-in. 6,426 ft., shot 6,510-55 ft., T.D. 6,555 ft.
Sunray 4 Harn, SW NE NW 27-12-3w, old well drilled deeper from 6,490 ft. to T.D. 6,541 ft., pay 6,511-41 ft., pumped 300 bbl.

Olympic, Okfuskee County: Manahan 2 Bunner-A, NE SE SE 24-10-8, old well drilled deeper from 1,847-1,857 ft., sand 1,842 ft., pumped 6 bbl.

Osage pools, Osage County: Peters 1 Osage, SE SE 10-22-10, 10 bbl., sand 1,670-1,706 ft., T.D. 1,713 ft.
Phillips 8-A Osage, NW SW SW 28-23-9, dry, T.D. 600 ft.
Sinclair 50 Osage, W½ NW 20-23-12, dry, T.D. 1,761 ft., repressure well in Avant pool.
Stanolind 14 Osage, NW SE SE 18-27-8, 46 bbl., Mississippian chat, 2,395 ft., T.D. 2,415 ft.

Ramsey, Payne County: Mid-Continent 1 Simpson, SE SW SW 7-18-2, old well plugged back from 4,840 ft. to 4,704 ft., perf. 4,626-34 ft., flowed 814 bbl. in 14 hr.

Searight, Seminole County: Gulf 1 Nevins, SE NW SE 32-10-6, old well plugged back from 4,334 ft. to 4,289 ft., Hunton 4,080 ft., 102 bbl.

West Seminole, Seminole County: Amerada 1 Willmott, S½ NE SE 20-9-6, pumped 108 bbl., Wilcox 4,152 ft., 7-in. 4,059 ft., shot 4,140-54 ft., T.D. 4,165 ft.

St. Louis, Pottawatomie County: I. T. I. O. 8 Weems, NW NW SW 21-7-5, flowed 83 bbl., Calvin 2,800-13 ft., 7-in. 2,799 ft., shot on bottom, T.D. 2,813 ft.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Cement	2	1,668	7,296
Guthrie	5	2,217	27,495
West Hewitt	3	819	6,583
Oklahoma City	2	1,156	13,073
St. Louis	1	83	2,813
East Stroud	6	1,222	17,069
Tecumseh Lake	1	350	5,272
Other fields	19	1,623	42,007
Wildcats	3	896	17,575
Gas wells: Cement	1	*18.5	4,971
Wildcats	1	*12	5,795
Dry holes: Fish	1	.....	3,052
Other fields	7	.....	12,643
Wildcats	5	.....	13,169
Total	59	.....	180,659
Recompletions	5	1,239	.....
Input and repressuring wells	2	.....	.....

*Million cu. ft.

AVERAGE DAILY PRODUCTION

LEADING OKLAHOMA FIELDS

	July 12	July 5
Allen	4,425	4,400
Billings	6,225	6,200
Burbank	8,150	8,100
South Burbank	7,400	7,375
Balance Osage	18,100	18,000
Blackwell district	3,550	3,500
Bristow-Slick	6,500	6,450
Coyle	3,900	3,900
Crescent	1,650	1,650
East Cromwell	1,975	1,975
Cromwell	2,825	2,800
Cumberland	6,700	6,700
Cushing-Shamrock	9,175	9,125
Dill	4,400	4,000
Duncan	3,575	3,550
Edmond	3,475	3,425
Fish	4,400	4,350
Fitts	11,950	12,200
Jesse	1,900	1,875
Graham-Fox	2,175	2,200
Guthrie	3,600	3,600
Healdton	8,700	8,675
Hewitt	11,500	10,850
Keokuk	2,725	2,750
Konawa	1,075	1,050
Lucien	5,850	5,850
Moore	950	925
Northeastern counties	17,275	17,150
Oklahoma City	83,400	106,500
Olympic	1,625	1,625
Ramsey	3,950	3,925
Sasakwa	1,150	1,175
Sholem-Alechem	2,675	2,650
Stroud	1,200	4,000
Seminole district:		
Bowlegs	5,975	5,950
Carr City	2,200	2,225
Dora	1,175	1,175
Earlsboro	3,950	3,925
East Earlsboro	1,725	1,725
South Earlsboro	550	575
Little River	6,400	6,375
East Little River	875	875
Mission	1,275	1,250
Seminole	6,400	6,350
East Seminole	950	925
Searight	1,825	1,800
Total Seminole	33,300	33,150
St. Louis-Pearson	17,650	17,500
Tatums-Tussy	5,250	5,225
Wewoka	1,850	1,825
Yale-Jennings	3,350	3,350
Total Oklahoma	414,100	433,275

North St. Louis, Pottawatomie County: Amerada 2 J. Peters, NE NW SE 27-8-4, flowed 765 bbl. through 1-in. choke, Hunton 3,845 ft., 7-in. 3,582 ft., acid, T.D. 3,853 ft.

East Stroud, Creek County: Lewis 6 Jones, SW SE SW 32-15-7, flowed 140 bbl., Prue 2,823 ft., 7-in. 2,823 ft., shot 2,830-66 ft., T.D. 2,870 ft.
Devonian 1 Hamilton, NW SW SE 32-15-7, flowed 309 bbl., Prue 2,775 ft., 5-in. 2,775 ft., lime 2,824-25 ft., shot 2,789-2,819 ft., T.D. 2,825 ft.

(Continued on Page 72)

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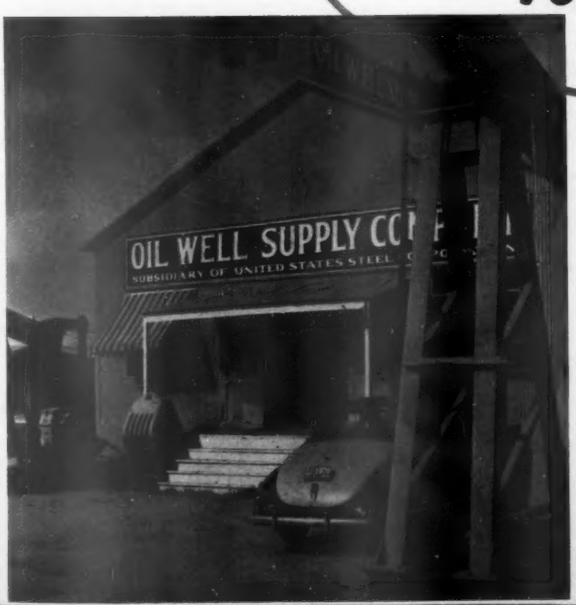

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Gas-Condensate Strike May Be Extension to Dorcheat

By GEORGE WEBER

SHREVEPORT, La., July 14.—What appears to be a new gas-condensate field was brought into production last week in Columbia County, Arkansas, as McAlester Fuel Co. completed 1 Franks, located 4½ miles east of Dorcheat. The test may mark an extension to the Dorcheat field, producing oil and condensate. However, until bottom-hole pressures, hydrogen sulfide content, and other characteristics of the new area have been checked with Dorcheat, the status of the new strike is not known. Even such tests cannot be considered proof, and drilling in the area between the pools will be necessary to prove extension.

Regardless of the question, the new well is important. Formerly, gas-condensate wells were disappointments when oil was sought, but recent developments calling for much gas to be used as fuel in steam-electric power plants in defense-aluminum production will considerably improve the gas-outlet situation in South Arkansas. The gas fields to be affected if the project is ordered will be McKamie, Dorcheat, Big Creek, and the new area.

The McAlester well is producing from the Smackover lime through perforations at 8,906-14 ft. On an initial gage it made 48 bbl. of 60-gravity water-white condensate through a ¼-in. choke in 3½ hours. Tubing pressure was 2,650 lb. and casing pressure 2,700 lb. Although the gas-liquid ratio was not determined accurately, it is estimated to be in excess of 10,000 cu. ft. per bbl. The Smackover was topped at 8,819 ft. and porosity at 8,827 ft. The well is located near the town of Macedonia, and the pool may be given that name pending proof of extension to Dorcheat.

Although development in the vicinity of the new well, and in the area between it and Dorcheat, is expected to be active, operations may await a well-spacing order from the Oil and Gas Commission. Operators in both areas favor wider spacing than the 40-acre pattern now in effect, and in view of the gas-condensate character of the production, it is expected that 160-acre drilling units will be fixed.

Wildcat Apparently Limits McKamie to Northwest

McKamie has received its first definition, it was indicated late last week, as the Carter Oil Co. 1 Cornelius, a northwest outpost, showed poor indications of making a producer. The test topped the Smackover lime at 9,228 ft. but porosity in the top of the formation was not topped until 9,324 ft. and it proved tighter than expected. Medium porous lime with odor was cored at 9,332-52 ft. and lime with low porosity and permeability was encountered to 9,392 ft. On a drill-stem test at 9,332-92 ft., using ¼-in. top choke and ½-in. bottom choke, and a load of 15 stands of water, 14 stands of water, 1 stand of mud and 25 stands of salt water were recovered in 15 minutes. Operators were last reported coring below 9,412 ft.

Attention will now be directed to the Carter Oil Co. 1 Hanes, a west outpost. Some geologists share the belief that the field may extend east and west as do most of the Smackover lime pools in South Arkansas, and that the lime may dip sharply to the north, as in the Magnolia field, with the Cornelius test located just off the north edge of production. This contention cannot be proven or disproven until more drilling has taken place, and the 1 Hanes will largely determine the extent of the field to the west, where the geophysical picture indicates the field should extend.

Last week marked staking of another important Smackover lime wildcat, Ohio Oil Co. 1 Garner, located between Lewisville and Stamps, Lafayette County. In the same county, Tide Water Associated Oil Co. and Seaboard Oil Co. are drilling 1 Moore, 6½ miles northwest of McKamie.

ARKANSAS COMPLETIONS

Wildcats

Clark County: W. S. King 1 McKenzie, SE SE NW 30-10-19, T.D. 1,336 ft., dry.

SUMMARY OF COMPLETIONS

North Louisiana

	No.	Bbl.	Footage
Oil wells: Bellevue	1	5	380
Sligo	2	185	6,313
Caddo	3	160	4,940
Georgetown-Urania	2	100	3,144
Little Creek	1	165	2,974
Nebo	1	83	4,360
Olla	3	425	7,132
Gas wells: Monroe	1	*33.76	2,185
Dry holes: Bellevue	1	.....	425
Caddo	3	.....	5,022
Waskom	1	.....	2,603
Georgetown-Urania	1	.....	4,005
South Olla	2	.....	6,861
Total	22	.....	50,344

Arkansas

	Oil	Bbl.	Footage
Oil wells: Troy	1	75	2,151
Urbana	1	50	3,570
Gas wells: Wildcat	1	*32.90	8,917
Dry holes: Champagnolle	1	.....	2,831
Smackover	1	.....	2,640
Wildcats	1	.....	1,336
Total	6	.....	21,445

East Texas Border

	No.	Bbl.	Footage
Oil wells: Caddo	1	10	2,407
Dry holes: Wildcats	1	.....	5,502
Total	2	.....	7,909

*Million cu. ft.

Columbia County: McAlester Fuel Co. 1 Franks, SE SE 16-18-21, 329 bbl., ¼-in. choke, T.P. 2,650 lb., C.P. 2,700 lb., T.D. 8,781 ft., perf., 8,906-14 ft.

Fields

Troy, Nevada County: Benedum & Trees 8 Fincher, SE SE NE 10-14-20, 56 bbl., pumped, T.D. 2,151 ft.

Champagnolle, Union County: Kinard Curtis 1 Ward, NW SW 14-17-14, pump salt water, abandoned, T.D. 2,831 ft.

Smackover, Union County: I. Pesses and W. R. Fields 1 school fee, SE NE NW 8-16-16, T.D. 2,640 ft., dry.

Urbana, Union County: Marine Oil Co. 9-B Thompson, NE SE 3-18-13, pumped 50 bbl., T.D. 3,570 ft., 7-in. casing 3,540 ft.

ARKANSAS WILDCAT REPORT

Clark County: Coker, Grieves & Christman 1 Williams, NE NE NE 7-11-20, T.D. 1,384 ft., tested salt water, S.D.

Howard County: DeGrazier et al 1 Dierks Lumber Co., SW SW 7-8s-28w, drilling 540 ft.

Jefferson County: Patterson & Stratton 1 Stratton, SE NW NE 35-6s-9w, T.D. 1,693 ft., S.D.

Lafayette County: Tide Water and Seaboard 1 Moore, SW SE 29-17-24, drilling shale and lime 4,093 ft.

Lee County: Stanley A. Thompson 1 Comer, NE NE NE 17-3n-2e, drilling 96 ft.

Lonoke County: A. V. Riley 1 J. T. Gunter, SE SE SE 17-5n-10w, S.D. 3,066 ft., repairing rig.

Ouachita County: Arkansas Fuel Oil Co. 1 McGaughey, NW NW 6-15-18, T.D. 5,300 ft., S.D. rig repair.

Prairie County: Alvin E. Stark 1 Fidelity Mutual, NE NE SW 16-2n-6w, testing 1,250 ft.

Saline County: A. W. Givens 1 Williams, NW NE NE 18-3s-15, reaming, T.D. 1,090 ft.

St. Francis County: D. T. Hargraves, trustee 1 Peters, NE NE NE 21-4n-1w, drilling 1,072 ft.

New Wildcat Locations

Columbia County: L. L. Prock 1 Young, NE SE 21-15-21, rigging up.

Clark County: Coker, Grieves et al 2 Williams, NE NE 7-11-19, drilling 326 ft.

Lafayette County: Ohio Oil Co. 1 Garner, NW SW 13-16-24, rigging up.

North Louisiana Wilcox Activity of Routine Nature

Routine operations marked the Wilcox play last week. Wells were completed at Olla, Little Creek, Nebo and Georgetown-Urania, and two dry holes were abandoned in the South Olla field. Two new wildcats were staked in Grant and Catahoula parishes, and six active tests continued in the area.

NORTH LOUISIANA COMPLETIONS

Bellevue, Bossier Parish: G. D. Farmer 1 Rhoem, SW SW NE 10-19-11, dry, T.D. 425 ft.

Premier Investment Co. 36 Wyche, NW NW 14-19-11, pumped 5 bbl., T.D. 380 ft., 7-in. casing 272 ft.

Sligo, Bossier Parish: Triangle Drlg. Co. 3-A Skannal, SW SW 13-17-12, pumped 75 bbl., T.D. 3,152 ft., 5½-in. casing 3,140 ft., 2,500 gal. acid.

Triangle Drlg. Co. 1 Treat, SE SW SE 14-17-12, pumped 110 bbl., T.D. 3,161 ft., 5½-in. casing 3,109 ft., 2,500 gal. acid.

Caddo, Caddo Parish: L. H. Freeman 1 Craig, SW NW NW 19-21-15, pumped 10 bbl., T.D. 1,667 ft., 5¾-in. casing 1,515 ft., 3,000 gal. acid.

Hawkins & Stewart 2 Barfield, SE NW SE 21-21-15, T.D. 1,610 ft. salt water, abandoned, 5½-in. casing.

Guy N. Kinney 6 Crystal Oil & Ref. Co., NW SE SE 24-21-16, dry, T.D. 1,705 ft.

Stanolind Oil & Gas Co. 137 Dillon, SW NW SW 12-21-15, 100 bbl., T.D. 1,683 ft., 5½-in. casing 1,499 ft., 5,000 gal. acid.

John Warren 1 Goodwin, NW SW NW 33-21-15, pumped 50 bbl., T.D. 1,590 ft., 5⅞-in. casing 1,408 ft., 4,000 gal. acid.

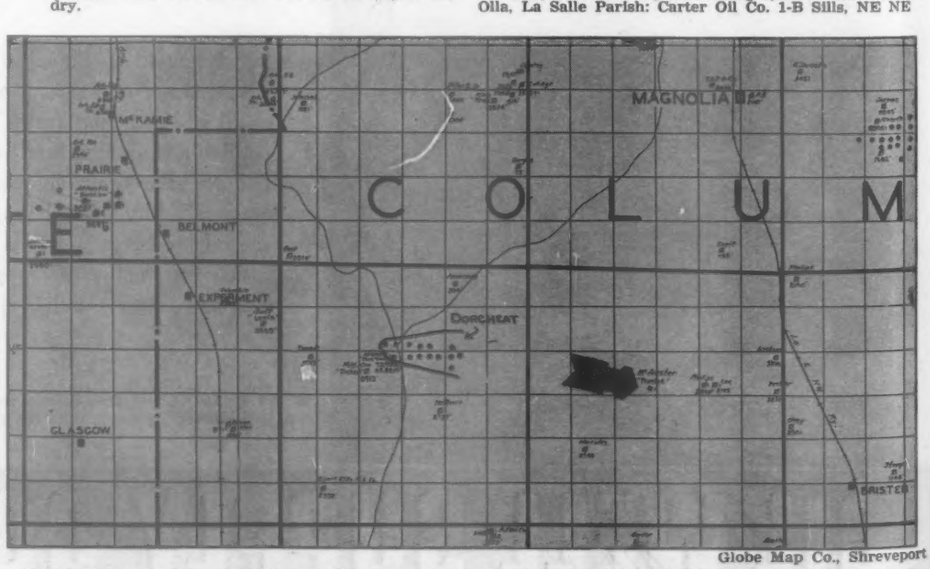
Caddo, Caddo Parish: Tiger Oil & Gas Co. 2-A Crystal fee, NW SW SE 24-21-16, T.D. 1,707 ft., salt water.

Waskom, Caddo Parish: Delta Drlg. Co. 1 Agurs Wynn unit, SE NW NE 23-17-16, T.D. 2,603 ft., salt water, abandoned.

Georgetown-Urania, La Salle and Grant Parish: J. E. Grandstaff 3 Morrison, NE NW SW 10-9n-1e, pumped 75 bbl., T.D. 1,532 ft., 6-in. casing 1,529 ft., Wilcox.

M. E. Andrews 5 Dean, NE SE 23-9-1e, pumped 25 bbl., T.D. 1,612 ft., 7-in. casing 1,609 ft. Wilcox.

Olla, La Salle Parish: Carter Oil Co. 1-B Sills, NE NE



Globe Map Co., Shreveport

The McAlester Fuel Co. 1 Franks, a 4½-mile outpost to the Dorcheat field, Columbia County, Arkansas, was completed last week making gas and 60-gravity condensate. The well is producing from the Smackover lime at about the same subsea elevation as the eastern wells at Dorcheat, but its extension of the area is doubted. The well is located in the vicinity of Macedonia, and the field may take its name from that town unless proven a Dorcheat extension

26-10-2e, 134 bbl. oil, 58 bbl. salt water, 30/64-in. choke, T.P. 360 lb., C.P. 500 lb., T.D. 2,335 ft., 7-in. casing 2,335 ft., perf. 2,197-2,200 ft., Wilcox.

Arkansas Fuel Oil Co. 15-C Tremont, SE SE 34-10-2, 116 bbl., 13/64-in. choke, T.P. 710 lb., C.P. 840 lb., T.D. 2,414 ft., 7-in. casing 2,424 ft., perf. 2,055-65 ft., Wilcox.

Petersen Pet. Co. 1 Cruse, NW SE 19-10-3e, 175 bbl., ¼-in. choke, T.P. 150 lb., C.P. 250 lb., T.D. 2,383 ft., 7-in. casing 2,282 ft., perf. 2,241-45 ft.

Georgetown-Urania, La Salle Parish: Ark. Fuel Oil Co. 2-D Tremont, T.D. 4,005 ft., dry.

Nebo, La Salle Parish: H. L. Hunt 27-A Goodpine, NW SE 16-7n-3e, 83 bbl., ¼-in. choke, T.P. 200 lb., C.P. 350 lb., T.D. 4,360 ft., 7-in. casing 4,144 ft., perf. 3,394-3,404 ft., Wilcox.

South Olla, La Salle Parish: E. A. Landreth Prod. Co. 1-B Tremont, SE NE 14-9n-2e, T.D. 3,111 ft., dry. Placid Oil Co. 6 Tremont, SE NW 23-9n-2e, T.D. 3,750 ft., dry.

Little Creek, La Salle Parish, Placid Oil Co. 1 Haile, NW NW 32-9n-2e, 165 bbl., 21/64-in. choke, T.P. 100 lb., C.P. 400 lb., T.D. 2,974 ft. 7-in. casing 2,728 ft., Wilcox.

Monroe, Ouachita Parish: Amalgamated Co. 5 Cole, NW NW SW 7-19-4e, 33,760,000 cu. ft. gas, R.P. 460 lb., T.D. 2,185 ft., 6-in. casing 2,121 ft.

NORTH LOUISIANA WILDCAT REPORT

Caldwell Parish: Big West Drlg. Co. 1 A. Lowe, SE SE 36-12-3e, T.D. 4,009 ft., S.D.

Southern Carbon Co. 1 Howard, SW SE 13-14-4e, rigging up.

Catahoula Parish: Carter and Phillips 1-B Tensas Delta Land Co., NE SE 15-5n-5e, drilling 397 ft.

Claiborne Parish: Big West Drlg. Co. 1 Alford, C W½ 11-21-4w, drilling 3,470 ft.

De Soto Parish: J. E. Stock et al 1 Cook, NW NE 32-13-14, T.D. 2,890 ft., W.O.

Franklin Parish: S. J. Ryan 1 Womble, NW NW NW 11-12n-8e, set surface casing 285 ft., W.O.C.

La Salle Parish: Aden Oil Co. 1 Grey, NE NE 36-8-2e, T.D. 405 ft., W.O.C.

Rhodes & O'Mara 1 Prudential Life, NE SE 36-11-10, drilling 5,178 ft.

Sabine Parish: Roy Raines 1 C. Carter, 27-9-11, S.D. 3,485 ft.

West Carroll Parish: R. H. Crowe, trustee, 1 Bruce Lumber Co., SE 16-21-9e, drilling chalk 2,650 ft.

New Wildcat Locations

Catahoula Parish: O. C. Borah 1 Womack, Sec. 54-9n-5e, 10-in. casing 369 ft.

Grant Parish: E. F. Neely 1 McAdams, NE SE 19-6n-2e.

AVERAGE DAILY PRODUCTION

NORTH LOUISIANA

	July 12	July 5
Caddo light	6,050	6,025
Caddo heavy	2,170	2,150
Cotton Valley	15,090	18,140
Cross Lake	2,725	2,510
De Soto and Red River	995	1,000
Haynesville	2,510	2,635
Homer	2,875	2,860
Lisbon	2,819	2,780
Nebo	2,280	2,200
Olla	12,455	12,190
Rodessa	14,475	14,710
Sligo	2,300	2,165
Sugar Creek	1,255	1,560
Urania	2,310	2,260
Zwolle	1,145	1,140
Total North Louisiana	74,205	77,070

SOUTH ARKANSAS

Atlanta	2,965	2,970
Buckner	2,240	2,520
Champagnolle	850	890
Dorcheat	1,740	1,825
El Dorado	1,540	1,520
Magnolia	20,060	20,050
Nick Springs	1,020	960
McKamie	2,810	2,800
Rodessa	1,390	1,445
Schuler	16,500	16,450
Smackover, light	1,840	1,820
Smackover, heavy	12,925	12,940
Troy	1,040	1,020
Urbana	1,950	1,920
Village	1,075	1,010
Total South Arkansas	72,330	72,535

MISSISSIPPI

Tinsley	41,585	33,375
Pickens	580	455
Total Mississippi	42,165	33,830

East Texas Border Expects Wildcat Campaign

Paul Pewitt abandoned 1 Barton, Shelby County, at 5,502 ft. The wildcat, 6 miles northeast of Hemphill, attempted to blow out several weeks ago at 5,419 ft. New wildcatting is expected to increase the volume of east border counties within the next week or two. Western Marion and Harrison counties will share most of the new activity.

EAST TEXAS BORDER COMPLETIONS

Caddo, Marion County: A. H. Carpenter 2 Wm. Burr, M. G. Nall Sur., pumped 10 bbl., T.D. 2,407 ft., 7-in. casing 2,200 ft.

Wildcat, Shelby County: Paul Pewitt 1 Barton, John S. Lacy Sur., T.D. 5,502 ft., dry.

EAST TEXAS WILDCAT DRILLING REPORT

Panola County: Crow Drlg. Co. et al 1 Frost Lumber Ind., Thos. Kelly A-372 Sur., cored 6,314-34 ft., recovered silstone, no show, W.O.

Sabine County: Sturm & Womack 1-A Keith, L. Grace Sur., old T.D. 6,925 ft., P.B. and tested salt water, show gas, 4,950-66 ft., W.O.

San Augustine County: Roper & Todd 1 Long Bell Lumber Co., N. Hayden Sur., stuck drill pipe, circulating oil.

Extensive Wildcatting May Follow Wide Lease Play

By R. MARNE SANFORD

DALLAS, Tex., July. 14. — Leasing and blocking in eastern Texas is making rapid progress toward the promotion of more wildcats for the district. Operators were busy throughout the whole region from Red River County in the northeast corner of the district to Limestone County in the southwest corner. The greatest concentration of activity, however, was in Navarro County, where Sun Oil Co. has assembled two blocks, a total of 9,000 acres.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil: East Texas field	15	561	54,528
Hawkins	6	2,300	26,603
Other fields	2	297	5,883
Wildcats	1	60	7,308
Gas: Fields	1	*70.0	7,402
Dry: Fields	3	.....	9,393
Wildcats	3	.....	6,640
Total	31	.....	117,757

*Million cu. ft.

In the southwestern part of Navarro County, south of Dawson, Sun is reported to have leased more than 1,800 acres in the J. Graham, J. L. Holmes and S. Denton surveys. This new acreage brings the firm's block in this sector to a total of almost 5,000 acres. Within a 3-mile radius of Chattfield, in the extreme northern part of Navarro, the Sun Oil Co. has been engaged in another checkerboard play and has acquired 4,000 acres to the east, south and west of the town.

An 18,000-acre block in Red River County, in the Deport and Fulbright areas, has been turned to F. R. Jackson by Magnolia Petroleum Co. Under terms of agreement, Jackson is reported to have acquired one-half interest in the block for drilling a wildcat test which probably will be taken to the Travis Peak of perhaps the Permian lime. Tentative location of the wildcat is on the J. N. Henry 100-acre tract in the M.E.P.&P. Survey, 3 miles north of Fulbright.

The Texas Co. has taken an active interest in the district, holding acreage in Smith, Rains and Hopkins counties. In Smith County, 2 miles southwest of Friendship, this company has taken this week 51 acres in the N. Doyle Survey and is reported to be the largest acreage holder in the sector. Although leasing play has been going on in this district for the past 2 years, no drilling has been undertaken. However, the Texas Co. is expected to drill a Pettit lime or Travis Peak sand test some time in the near future.

In Rains County the Texas Co. has taken additional acreage 2 miles northeast of Emory, bringing its total holdings to more than 1,225 acres, and in the Como sector of southeast Hopkins County the Texas Co. has leased acreage. The size of this block is not known.

Magnolia Petroleum Co. has leased 800 acres in the D. Murphy and J. G. Moore surveys in Limestone County and is reported to have taken an additional 229 acres in the William McCoy and R. Rutledge surveys.

Scattered leasing has been reported from Upshur, Wood, Franklin, Henderson and Kaufman counties, with many independent companies participating. Wildcat activity in the East Texas district should reach an all-time high by the end of the summer.

Jack Dempsey and Bobby Manziel Spud New Test

Two wildcats in Wood County were reported at the end of the week. Bobby Manziel, Hawkins field discoverer, and Jack Dempsey, former heavyweight champion of the world, are spudding a Woodbine sand test 2 miles southeast of Crow. The wildcat, 1 Barney Holmes, is on a Gulf Oil Corp. farmout in the T. J. Rusk Survey.

Another Woodbine sand test, 2 miles north and slightly east of the Hawkins pool, will be drilled by N. P. Howell of Tyler. Location of the wildcat is given as 467 ft. out of the southwest corner of the S. H. Edwards Survey and on a 57.6-acre tract of the F. W. Fouke Lumber Co.

W. B. Hinton of Mount Vernon will attempt to establish Paluxy sand oil production between the Talco pool of Titus and Franklin counties and the Sulphur Bluff pool of Hopkins County at 1 T. A. Hargraves, being drilled on a projection of the Talco-Sulphur Bluff fault. No. 1 T. A. Hargraves is located in the S.P. Survey, 8 miles northwest of Mount Vernon in western Franklin County. Machinery is being moved in for immediate drilling.

The first wildcat exploration in several years for Rockwall County is expected to get under way in the near future. W. R. Pankey and J. W. Bibb have announced the location of 1 Dloyd Hartman, 5 miles southwest of the Rockwall townsite. The 1,000-ft. Woodbine sand test is 630 ft. from the west and 600 ft. from the south lines of the W. Crabtree Survey and on a 178-acre tract.

Smith County Pool Is Extended South

A ½-mile-south extension of the Chapel Hill field was indicated last week by Sun Oil Co. 1 Shofner, Andrews Survey. The hole topped the Travis Peak at 8,268 ft. and was bottomed at 8,285 ft. Porous Pettit lime with oil show was drilled at 8,150-63 ft. and possible shows were logged at 8,175 ft., at 8,181 ft., at 8,231 ft. and at 8,242 ft. Pipe is being set to the bottom for testing through perforations.

EAST TEXAS COMPLETIONS

Wildcats

Anderson County: Cecil Stein 1 Davey & Royal, 375 ft. from N and 402 ft. from W lines 160-ac. tract, M. Rogers Sur., dry at 490 ft.

Gregg County: Humble 2 Horton-Dickson, H. Frost Sur., SW of Willow Springs, 60 bbl., ½-in. choke, 7,300-08 ft.

Houston County: G. C. Dixon 1 Texas Long Leaf Lbr., J. Chears Sur., 9 mi. W of Lovelady, dry at 1,415 ft.

Wood County: Plains Prod. Co. 1 P. F. Jones, 2,050 ft. from W and 120 ft. from N lines of NE cor. of Joseph Simpson Sur., Alba townsite, dry at 4,735 ft.

East Texas Field

Longview, Gregg County: Lucey Pet. 14 Fisher, 60 bbl., 3,596-3,618 ft.
Rowan & Nichols 6-B Todd, 50 bbl., perf. casing 3,652-62 ft., T.D. 3,710 ft.
Sklar Oil 2 Magrill, 30 bbl., 3,648-56 ft.
A. H. Tarver 6 Free, 45 bbl., 2½-in. tubing, 3,643-62 ft.
A. H. Tarver 7 Free, 50 bbl., 2½-in. tubing, 3,647-60 ft.
Tide Water 17 Jones, 60 bbl., 3,661-70 ft.
Kilgore, Gregg County: Gross & Schulman 4 Walker, dry at 3,761 ft.
Magnolia 26 Griffin, 20 bbl., 3,544-3,610 ft.
Ed Pace 8 Elder, 40 bbl., 3,540-70 ft.
C. R. Starnes 48 Money, 60 bbl., perf. casing 3,718-27 ft., T.D. 3,756 ft.
Sun Oil 12 Elder, 40 bbl., 3,508-50 ft.
John Wrather 29-A L&G.N.R.R., 60 bbl. 3,548-68 ft.
Joiner, Rusk County: Oran Lowry 3 Hale, 10 bbl., 3,519-89 ft., T.D. 3,592 ft.
Stanolind 8-A Schuyler, 15 bbl., 3,644-70 ft.
Stanolind 11-B Schuyler, 10 bbl., 3,644-69 ft.
Stanolind 12-B Schuyler, 11 bbl., 3,649-67 ft.

Other Field Completions

Angus, Navarro County: W. H. Clements 3 Edens, dry at 368 ft.
Hawkins, Wood County: Humble 1 Dodds, 111 bbl. in 6 hr., ¼-in. choke, perf. casing 4,708-13 ft.
Humble 1-B Moore, 115 bbl. in 6 hr., ¼-in. choke, perf. casing 4,260-25 ft., T.D. 4,783 ft.
Humble 1 Preddy, 115 bbl. in 6 hr., ¼-in. choke, perf. casing 4,625-32 ft., T.D. 4,743 ft.
Humble 1 Smith, 116 bbl. in 6 hr., perf. casing 4,576-84 ft., T.D. 4,743 ft.
Humble 1 T.&P.R.R., 101 bbl. in 6 hr., ¼-in. choke, perf. casing 4,792-4,807 ft.
Rudco 1 Cobb heirs, 125 bbl. in 6 hr., ¼-in. choke, perf. casing 4,604-68 ft., T.D. 4,814 ft.
Long Lake, Anderson County: Long Lake Prod. 1 Cartmel, dry at 5,264 ft.
Van, Van Zandt County: G. B. Ray 1 Carter, 47 bbl. in 3 hr., ¼-in. choke, 2,889-2,909 ft.
Willow Springs gas, Gregg County: Union Producing 2 Hays, 70,000,000 cu. ft. gas, open flow, 5,000 gal. acid, T.D. 7,402 ft.

(Continued on Page 84)

Barton Arch Play Pushes North With Another Strike

By ROBERT INGRAM

HARD on the heels of the Stanolind Oil & Gas Co. strike in Kearny County in the extreme western part of the state came the discovery last week of a new pool in the far northern section near the Ray pool of Phillips County. It was the second northerly strike in as many weeks and put Phillips and Norton counties squarely in the western Kansas play which is dominated by traps along the Barton arch.

The new discovery was Helmerich & Payne and Phillips Petroleum Co. 1 Hewitt, S½ SE NE 11-4-21w, which swabbed 65 bbl. of 36-gravity crude in 19 hours from the Lansing series. The test was taken without first treating the well with acid and the final completion was expected this week. The well topped the Lansing at 3,402 ft., the Arbuckle at 3,655 ft., and the granite at 3,746 ft., then plugged back to 3,404 ft. and tested in the Lansing.

Meantime, Cities Service Oil Co., which opened the Ray pool of Phillips County less than a year ago, found the first Arbuckle production there. Other pay has come from the Reagan sand. The new zone was opened by Cities Service 1 Vehige, SW SW 28-5-20w, which topped the Arbuckle at 3,575 ft., logged saturation, topped the Reagan at 3,607 ft. and found saturation and drilled to a total depth of 3,654 ft. in the granite. Operators set pipe on bottom and then perforated the casing with 12 holes from 3,568-79 ft. in the Arbuckle. Oil rose 2,000 ft. in 17 hours.

After acidizing, the well was tested and given a potential of 2,572 bbl.

The Kearny County strike, far to the west, was still in the testing stages. Stanolind Oil & Gas Co., operators, were to set pipe after getting 1,850 ft. of oil in the hole from a drill-stem test in a stray sand in the Cherokee series of the Pennsylvanian at 4,740-60 ft. the previous week. This test was in a rank new area and if successful was expected to open an entirely new play for Kansas and perhaps eastern Colorado.

McLouth Pool in Eastern Kansas Growing Important

While western Kansas was making news with important new oil finds last week, the extreme eastern part of the state was also in the midst of a new play which was beginning to look important. It was at the McLouth field, on the county line between Jefferson and Leavenworth counties, opened nearly 2 years ago within a few days of the discovery well at Falls City, Neb., and one of the few strikes of the Forest City basin exploratory campaign.

Last week there were five completed oil wells in the field, all ranging from 50 to 80 bbl. a day capacity, and a sixth ready for a pumping test. In addition there were 15 gas wells, largest of which was gaged at 16,800,000 cu. ft., and seven rigs drilling—four in Jefferson County and three in Leavenworth County.

Most important fact, however, was that production of gas was found in three different zones—the Bartlesville, Burgess and second break in the Mississippian lime—and oil production was coming from the Bartlesville and the Mississippian lime and was believed to be showing in gas wells in the Burgess.

Since major companies have shown little interest in the area, except for Magnolia Petroleum Co. which has one well and a large block of leases and Ohio Oil Co. which holds a number of leases southeast of the pool, all the development to date has been by independent operators, many of them new to the oil business. Discovery of the pool was made in the middle of November 1939 by McLaughlin Sons, Inc., paving contractors of Des Moines, Iowa, who are represented in the McLouth pool by Dan McLaughlin. The discovery well was 1 McLaughlin, SW NE NW 4-10-20e, which was completed in February 1940 for 2,000,000 cu. ft. of gas from the Bartlesville at 1,426 ft. This well was drilled to the Hunton lime at 1,884 ft. and to a total depth of 1,925 ft. and, according to Huntsman Haworth, geologist who mapped the structure, it logged five oil shows in one 175-ft. section of the Mississippian. These shows were tested after acid treatment but were not successful.

The McLaughlin group then dropped to the south in the same section in a hunt for more gas, but discovered oil instead at McLaughlin 1 McLeod, NW SW 4-10-20e, Jefferson County. With elevation of 1,100 ft., the well found the top of the Mississippian lime at 1,470 ft. and was drilled to a total depth of 1,594 ft. At 1,492 ft. the operators began bailing free oil. They deepened to 1,504 ft., set 6-in. casing at 1,252 ft. and underreamed to 1,564 ft. After acidizing, the well began pumping a low-gravity crude (21.3) at the rate of about 40 bbl. a day. Later the well had to be worked over but is still on production.

Cities Service Co. is buying the gas output from the McLouth field. A gathering line runs from the field to connect with the Cities Service line at Tonganoxie. The gathering line is operated by A & B Pipe Line Co.

There is no gathering line for oil and all transportation of crude is done with trucks.

● SUMMARY OF COMPLETIONS ●

Kansas

	No.	Bbl.	Footage
Oil wells: Burnett	2	6,000	6,723
Chase	2	41,822	6,476
Hall-Gurney	5	2,494	14,994
Kraft	1	64	3,341
Silica district	5	4,350	16,666
Stoltenberg	2	449	7,141
Trapp	1	242	3,375
Other pools	21	47,160	72,430
Wildcats	2	4,012	4,415
Dry holes: Silica	2	.....	6,765
Trapp	2	.....	6,769
Wildcats	3	.....	10,108
Total	48	.....	159,203

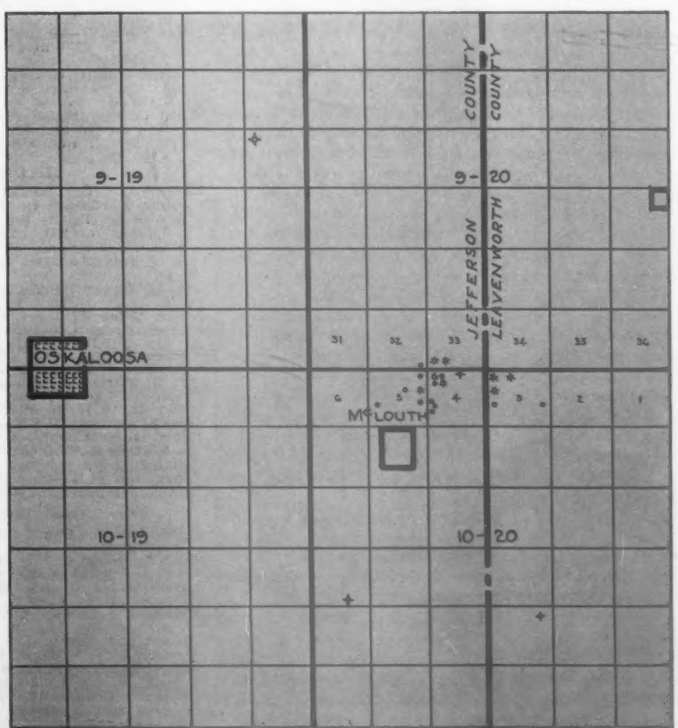
Nebraska

	No.	Bbl.	Footage
Oil wells: Falls City	2	3,715	4,574
Dry holes: Wildcats	1	.....	2,449

Missouri

	No.	Bbl.	Footage
Gas wells: Fields	3	*1.2	1,856

*Million cu. ft.



Kansas Blue Print Co., Wichita

Oil and gas wells in the McLouth pool, Jefferson and Leavenworth counties, Kansas, are shown here. Wells are producing from three zones and as yet the pool limits have not been defined. Discovery came during the Forest City basin play nearly 2 years ago

KANSAS COMPLETIONS

Wildcats

Stanolind 1 Ahnert ..... N½ NE SE 26-22-13w Potential 1,440 bbl., Arbuckle 3,745-48 ft., T.D. 3,761 ft., Viola 3,655 ft., Simpson 3,698 ft., *opens Ahnert pool*, Stafford County.

Ray 1 Vehige ..... SW SW 28-5-20w Potential 2,572 bbl., Arbuckle 3,575 ft., Reagan sand 3,607 ft., saturation, granite 3,635 ft., T.D. 3,654 ft., casing set on bottom, perf. 3,568-79 ft., oil rose 2,000 ft. in 12 hr., acidized, *opens Arbuckle production in Ray pool*, Phillips County.

Armer & Vernon 1 Redtzke ... S½ SW NW 5-16-11w Dry, T.D. 3,338 ft., Arbuckle 3,283 ft., Topeka 2,655 ft., 7-in. 3,115 ft., Barton County.

Lario 1 Lynch ..... S½ SE SW 24-4-20w Dry, T.D. 3,848 ft., P.B. and perf. Lansing, granite 3,843 ft., Phillips County.

Falcon-Seaboard 1 Stevens ..... E½ SW SW 3-13-14w Dry, T.D. 3,145 ft., Arbuckle 3,100 ft., Topeka 2,492 ft., Russell County.

Fields

Albert, Rush County: Schermerhorn 5 Schroeder, N½ NW NE 36-18-16w, 539 bbl., Reagan, T.D. 3,598 ft.

Bedford, Stafford County: Texas 1 Gerdes, NW NE SW 28-23-12w, 3,000 bbl., Arbuckle, T.D. 3,852 ft.

Bemis, Ellis County: Cities Service 10 McCord, SE NE SE 26-11-17w, 1,040 bbl., Arbuckle, T.D. 3,577 ft.

Breford, Barton County: Texas 2 Petterman, NW SE 13-17-11w, 380 bbl., Arbuckle, T.D. 3,333 ft.

Burnett, Ellis County: Champlin 1 Mock, SE SW NE 17-11-17w, 3,000 bbl., Arbuckle, T.D. 3,355 ft.
Shell 1 Deane, NE NE 14-11-18w, 3,000 bbl., Arbuckle, T.D. 3,368 ft.

Chase, Barton County: Bay 1 Grizell, NE SE NW 8-19-9w, 3,000 bbl., Arbuckle, T.D. 3,233 ft.
Cities Service 3 Habiger, SE NE 20-19-9w, 1,822 bbl., Arbuckle, T.D. 3,243 ft.

Coralena, Russell County: Coralena 3-A Sellens, 17-13-15w, 2,130 bbl., Kansas City lime, T.D. 2,995 ft.

Davidson, Russell County: H. H. Blair 1 Davidson, SE SE 33-15-11w, 60 bbl., Kansas City lime, T.D. 3,005 ft.

Dunbar, Cowley County: Leader 1 Rowling, NE NE SW 20-30-5e, dry, T.D. 3,119 ft., Mississippi lime 3,112 ft.

Emmeran, Ellis County: Bridgeport 3-A Froelich, NE SE 4-13-16w, 174 bbl., Kansas City lime, T.D. 3,253 ft.

Florence, Marion County: Urschell 1 Urschell, S½ SW 16-21-5e, dry, T.D. 2,330 ft.

Geneseo, Rice County: Cities Service 2 Ross, NW SW NE 11-15-8w, 302 bbl., Arbuckle, T.D. 3,267 ft.

Greenvale, Russell County: Texas 2 Kaufman, E½ NE NW 9-15-12w, swabbed 68 bbl., Gorham, T.D. 3,293 ft.

Hall-Gurney, Russell County: Texas 2 Keil, NW SE 36-14-14w, 833 bbl., Kansas City lime, T.D. 2,930 ft.
Coralena 9 Phinney, 30-14-19w, 186 bbl., Kansas City lime, T.D. 2,943 ft.
Hall 16 Miller, SW SE NE 31-14-13w, 209 bbl., Gorham, T.D. 3,105 ft.
Mid-Continent 8 Letsch, S½ NW 26-14-13w, 476 bbl., Kansas City lime, T.D. 2,881 ft.
Cities Service 4 Hickey, 25-14-14w, 790 bbl., Kansas City lime, T.D. 3,135 ft.

Hiss, Barton County: Clay Bros. 1 McGrevey, W½ SW SW 29-20-13w, dry, T.D. 3,527 ft.

Hoffman, Barton County: Black Marshall 2 Hoffman, W½ NE SW 14-16-12w, 1,861 bbl., Arbuckle, T.D. 3,316 ft.

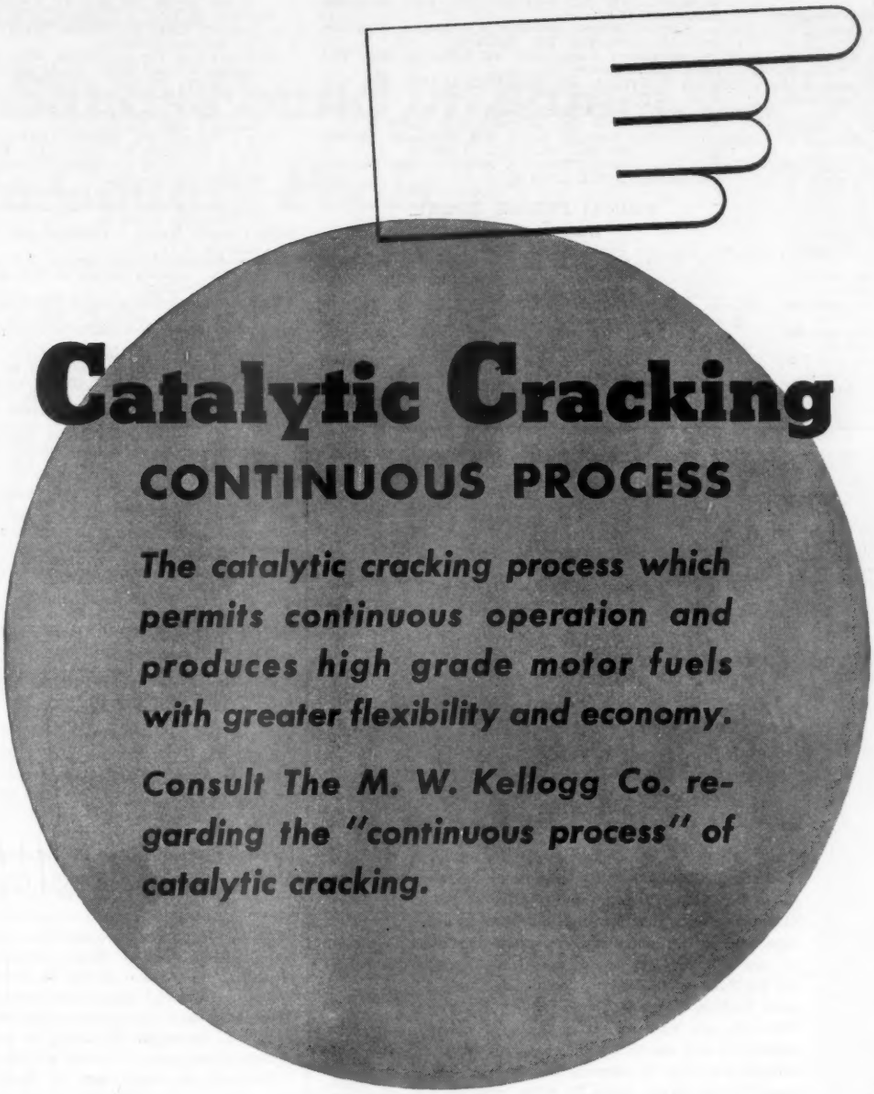
Kraft, Barton County: Stanolind 1 Radenberg, N½ NE NE 8-17-17w, 64 bbl., Arbuckle, T.D. 3,341 ft.

Lanterman, Barton County: I. W. Murfin 2 Lanterman-C, E½ SW SE 15-19-11w, dry, T.D. 3,417 ft.

Laton, Rooks County: Broadview 7 Beardmore, NE SW 2-9-16w, 316 bbl., Kansas City lime, T.D. 3,240 ft.

Lost Springs, Marion County: Rex & Morris 1 Bevan, S½ SW NW 27-17-4e, dry, T.D. 2,500 ft.

Pawnee Rock, Pawnee County: Stanolind 1-A Smith, W½ SW SE 13-20-16w, 60 bbl., Arbuckle, T.D. 3,867 ft.
Hall & Jordan 1 Smith, SW SE 12-20-16w, 62 bbl., Arbuckle, T.D. 3,836 ft.



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Catalytic Cracking Continuous Process

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Thermal Cracking

Thermal Polymerization

Thermal Reversion

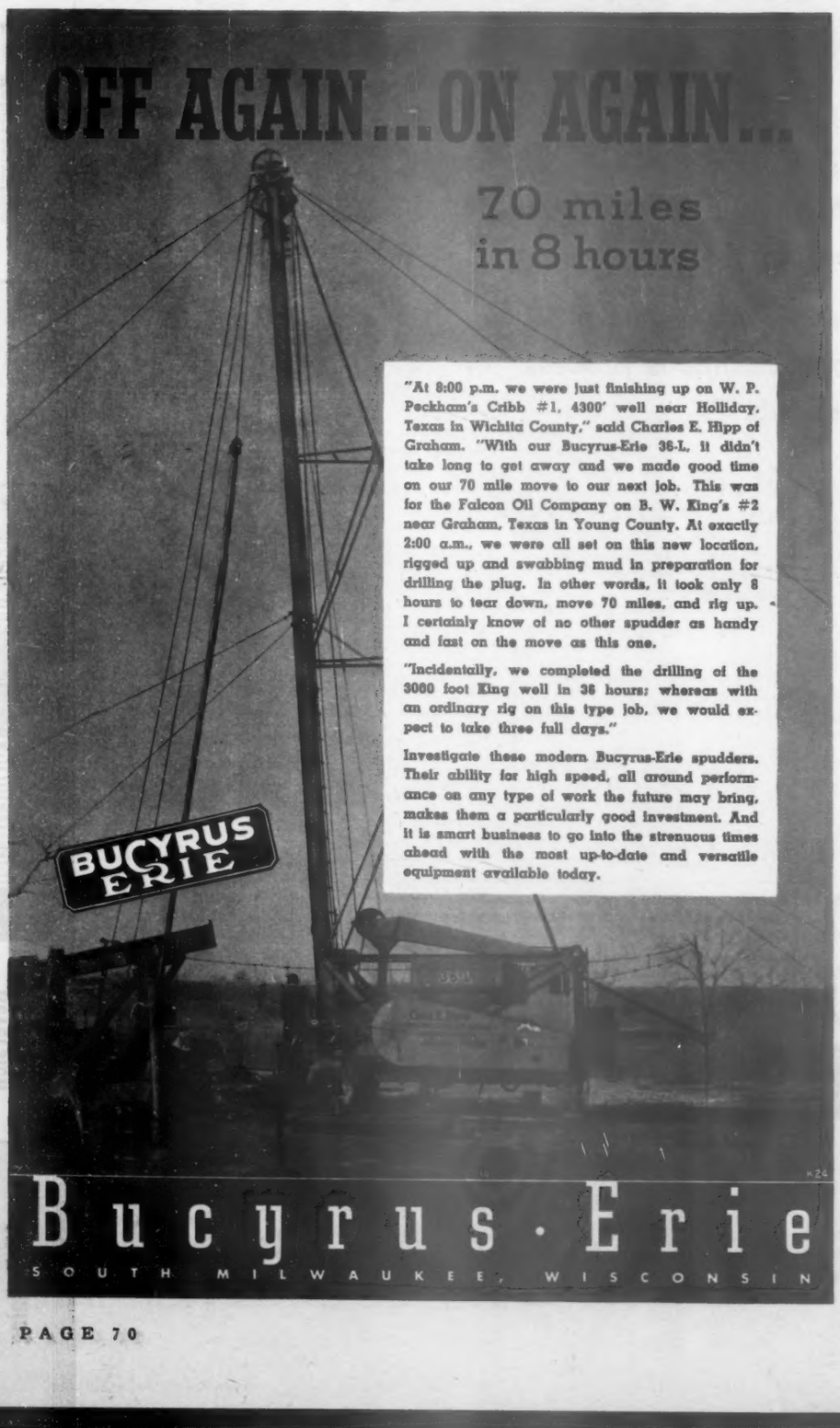
JUIK Processes for Lubricating Oil Refining

Ray, Phillips County: Cities Service 3 Johnson, 32-5-20w, 1,299 bbl., Reagan, T.D. 3,584 ft.
Raymond, Rice County: Branine-Holl et al 1 Wenke, SE SE 18-20-10w, 59 bbl., Kansas City lime, T.D. 3,123 ft.
Hyde & Stormfeltz 1-B Specht, N½ SE SW 16-20-10w, 3,000 bbl., Kansas City lime, T.D. 3,144 ft.
Roach, Stafford County: McMorrow 1 Williams, E½ NE SE 11-22-14w, dry, T.D. 3,855 ft., Arbuckle 3,849 ft.
Rusch, Russell County: Westgate-Greenland 3 Rusch, E½ NE NE 24-14-14w, 109 bbl., Arbuckle, T.D. 3,247 ft.
Silica, Barton County: Derby 8 State River Bed, SW NE 10-20-11w, 383 bbl., Arbuckle, T.D. 3,291½ ft.
Vickers 1 Herr, SE NW 24-19-11w, dry, T.D. 3,397 ft.
I.T.I.O. 1 Roth, NE SW 24-19-11w, dry, T.D. 3,368 ft.
South Silica, Barton County: Texas 2 Koch, E½ SW SW 7-20-10w, 3,000 bbl., Arbuckle, T.D. 3,328 ft.
Lario 5-A Zahorsky, 23-20-11w, 274 bbl., Arbuckle, T.D. 3,321 ft.
West Silica, Barton County: C. E. Ash 2 Koch A, W½ SW NW 7-20-11w, 636 bbl., T.D. 3,363 ft.
C. E. Ash 2-A Koch, SW NW 7-20-11w, 57 bbl., Arbuckle, T.D. 3,363 ft.
Stafford, Stafford County: Stanolind 5-A Charles, SE SE 15-24-12w, 3,000 bbl., Viola, T.D. 3,838 ft.
Stoltenberg, Ellsworth County: Texas 5 Schroeder, NW SW 27-16-10w, 374 bbl., Arbuckle, T.D. 3,303 ft.
Derby 1 Lank, 9-16-10w, swabbed 75 bbl., Arbuckle, T.D. 3,267 ft.
Stratman, Ellsworth County: Pryor & Lockhart 8 Stratman, NW NE 2-17-10w, 217 bbl., Arbuckle, T.D. 3,309 ft.
Trapp, Barton County: Sinclair 8 Hoffman, 7-16-13w, 242 bbl., Arbuckle, T.D. 3,375 ft.
Cities Service 4 Kosar, SW SE 5-16-13w, dry, T.D. 3,420 ft., Arbuckle.
Central 1 Krug-A, SE SE SE 13-15-14w, dry, T.D. 3,349 ft.
Voshell, McPherson County: Shell 6 Koehn, W½ NW NE 16-21-6w, 90 bbl., Simpson, T.D. 3,393 ft.
Whelan, Barber County: Olson 3-A Nuckolls, SE SW 30-31-11w, 394 bbl., chat, T.D. 4,290 ft.
Wherry, Rice County: Dickey 2 Brothers, S½ SW SW 1-21-7w, dry, T.D. 3,485 ft.

WILDCAT DRILLING REPORT

Western Kansas

Barber County: Pryor & Lockhart 1 Ishmael, S½ SE SW 35-34-11w, good stain 4,698-4,709 ft., base Mississippi 4,764-4,815 ft., 7-in. 4,612 ft., Viola 5,052 ft., drilling 5,058 ft.
Barton County: Helmerich & Payne 1 Unruh, E½ NE NW 16-20-15w, Arbuckle 3,720 ft., 5-in. 3,725 ft., loaded hole with water and drilled plug, ran 2-in. tubing, show gas, no oil, drilling ahead.
Isern 1 Laudick, S½ SE NW 28-16-12w, Topeka 2,780 ft., Lansing 3,116 ft., Arbuckle 3,368 ft., cored 3,371-77 ft. with some show oil, 5½-in. 3,368 ft., T.D. 3,377 ft., filled 400 ft. with oil in 12 hr., acid, swabbed 1½ bbl. then started making ⅝ bbl. an hr., 37 gravity, will be reacidized.
Branine & Holl 1 Rexroot, E½ NE SE 22-17-13w, Topeka 2,810 ft., Dodge 3,072 ft., Lansing 3,158 ft., drilling 3,185 ft.
Helmerich & Payne 1 Roth, W½ NW SW 30-19-11w, Arbuckle 3,377-85 ft., slight saturation and porous, 5-in. 3,375 ft., acid at 3,387 ft., 140 ft. oil in hole in 2 hr., more acid, no increase, T.D. 3,404 ft., P.B. 3,315 ft., ripped 3,260-72 ft., show oil, acid, bailed 1 bbl. fluid an hr.
Bay 1 Sehauf, S½ SE SW 11-16-12w, Arbuckle 3,358 ft., T.D. 3,361 ft., 5-in. 3,355 ft., drilled plug to 3,364 ft., filled up 2,750 ft. with oil in 16 hr., 41 gravity, to squeeze.
Cowley County: Pryor & Lockhart 1 Hall, SE NE 5-33-6e, Kansas City 2,525 ft., Mississippian lime 3,095 ft., drilling 3,200 ft.
Ellis County: Darby 1 Dreiling, SE SE NW 28-13-17w, drilling 1,717 ft.
Graham County: Cities Service 1 Gordon, SE NE NW 1-8-22w, spotted shows in Arbuckle at 3,665-70 ft., to run casing.
Kearny County: Stanolind 1 Patterson, E½ SE SE 23-22-38w, T.D. 4,902 ft., P.B. to test 1,850 ft. oil which showed on D.T. test from Cherokee series at 4,740-51 ft.
Norton County: Helmerich & Payne 1 Hewitt, S½ SE NE 11-4-21w, Arbuckle 3,655 ft., granite 3,746 ft., T.D. 3,750 ft., P.B. 3,404 ft. in Lansing, swabbed 65 bbl. in 19 hr., 36 gravity, to acidize.
Pawnee County: Amerada 1 Boyer, SE SW 12-20-16w, drilling 3,200 ft.
Phillips County: Lario 1 Bard, S½ SE NW 27-3-20w, drilling 3,415 ft. below Topeka lime.
Aladdin 1 Wiltrout, S½ SE NE 18-5-20w, Lansing 3,239 ft., show oil 3,240-46 ft., drilling 3,250 ft.
Reno County: Simpson 1 Snowbarger, SW SE NE 21-23-10w, Ft. Riley 1,715 ft., Florence 1,798 ft., Topeka 2,840 ft., Lansing 3,310 ft., Viola 3,722 ft., cored saturation 3,772-85 ft., to run casing.
Skelly 1 Linshield, SE NW 24-24-8w, Lansing 3,533 ft., T.D. 3,563 ft., run casing, to acidize.
Central 1 Dyck, W½ NW SW 4-22-4w, drilling 3,775 ft.
Rice County: McPherson 1 Link, NE SE 17-19-9w, water at 3,284 ft., to P.B.
Russell County: Central 1 Gaston, SE NW 14-15-12w, first report.
Central 1 Steinle, N½ NW NE 29-15-12w, drilling 2,000 ft.
Stanolind 1 Misener, SE NE 23-14-13w, T.D. 3,245 ft. in Arbuckle, cleaning out.
Falcon-Seaboard 1 Schroeder, SE SE SE 21-12-14w, first report.
Stafford County: Stanolind 1 Ward, NE NE SW 15-23-13w, first report.
Elbar 1 Curtis, NE NE NE 18-25-13w, drilling 700 ft.
Thomas County: Alva Billings 1 Ryan, E½ NE SE 27-8-32w, Lansing 4,283-97 ft., gas show oil, shot 4,268-83 ft., bailed 1 bbl. fluid an hr., mostly water, P.B. 4,268 ft., S.D.


OFF AGAIN...ON AGAIN...
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"At 8:00 p.m. we were just finishing up on W. P. Peckham's Cribb #1, 4300' well near Holliday, Texas in Wichita County," said Charles E. Hipp of Graham. "With our Bucyrus-Erie 36-L, it didn't take long to get away and we made good time on our 70 mile move to our next job. This was for the Falcon Oil Company on B. W. King's #2 near Graham, Texas in Young County. At exactly 2:00 a.m., we were all set on this new location, rigged up and swabbing mud in preparation for drilling the plug. In other words, it took only 8 hours to tear down, move 70 miles, and rig up. I certainly know of no other spudder as handy and fast on the move as this one.
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Lower Hunton Now Producing Both at Shubert and Falls City

ST. JOSEPH, Mo., July 14.—Production from the lower section of the Hunton lime, which had proved more important than upper production in the Falls City pool, has been opened in the Shubert pool of Richardson County. Salt water has been dogging other wells previously completed in the top of the Hunton at Shubert and the discovery is expected to revive activity there much as it has at Falls City.

The new pay was found by Black Gold Operating Co. 1 Bankers Life, SE SW 30-3n-16e, which perforated pipe at 2,454-51 ft. and tested 100 bbl. of clean oil in 12 hours. After the test the upper section of the Hunton was perforated and the well swabbed 360 bbl. in 24 hours from two zones.

Black Gold, which is carrying most of the operations in this area, has started working over several wells and will deepen to the new zone.

NEBRASKA COMPLETIONS

Wildcats

Bow & Arrow 1 Wrightsman . . SW NW NE 26-6n-13e Dry, T.D. 2,474 ft., Nemaha County.

Fields

Falls City, Richardson County: Ohio 5 Bucholz, NE NE SE 17-1n-16e, perf. Hunton lime 2,291-95 ft., flowed 1,440 bbl. daily.
Harry Harper 5 Sibbernsen, C N½ N½ NW 20-1n-16e, Hunton 2,192 ft., perf. 2,275-79 ft., flowed 2,300 bbl. daily.

NEBRASKA DRILLING REPORT

Richardson County: Frank Powers 1 Albin, SW SW 10-1n-14e, Kansas City lime 1,130 ft., drilling 1,710 ft.
Gage County: Walt Rider 1 Warren, NE NE 21-3n-5e Viola 2,587 ft., show oil 2,605-30 ft., lowered pipe and tested water, perf. 2,000-05 ft., to get more water.
Nelson Drilling 1 Edius, E½ SW 5-3n-7e, set surface pipe.
Nemaha County: Continental 1 Gauchart, SW NW NE 26-6n-13e, set casing at 1,972 ft., fishing.

MISSOURI COMPLETIONS

Fields

Platte County: Missouri Valley 7 Brown, NE SW 7-51n-33w, Wayside and Warrensburg sands, T.D. 475 ft., 300,000 cu. ft. gas.
Missouri Valley 1 Drennon, SW SE NE SE 7-51n-33w, Squirrel sand, T.D. 684 ft., 450,000 cu. ft. gas.
Missouri Valley 3 Long, SW SE SE SE 7-51n-33w, T.D. 697 ft., Peru sand, 368,000 cu. ft. gas.

MISSOURI DRILLING REPORT

Knox County: Johnston 1 Harold Early, NW NW SE 1-61n-12w, elev. 806.5 ft., drilling.
Shelby County: MacAlpine & Carmichael 1 McKillip, SE SE 35-59n-11w, drilling 610 ft. (tight hole).

New Sands Found in Three White County Pools

By STAFF CORRESPONDENT

MATTOON, Ill., July 14.—New productive zones were added to three fields in White County during what may prove to be the most exciting week of oil development of the year in the Illinois basin. East of McClosky production in the Stokes field, Pure 1 Kissener, SE SE SE 7-6s-9e, was completed last week with an initial production of 125 bbl. a day in the Benoist sand, indicating a new zone for the area.

In the new Rising Sun field south of Maunie, Cherry & Kidd 3 Henry Karch, SE NE SW 24-6s-10e, was showing for a 100-bbl. well in the Palestine sand at the end of the week. The Palestine is the third producing zone in the field, other production being obtained from the Tar Springs and Aux Vases sands.

Meanwhile, Duncan & Martin 1 Baker, NE NW NW 14-7s-8e, outpost to White County's Roland field, was testing the Aux Vases sand in the first attempt at commercial production from this horizon in the area. In a 40-minute drill-stem test at 2,885-2,912 ft., oil rose 1,200 ft. in the hole.

Wayne County Discovery Shows for 2,500-Bbl. Well

Wiser 1 Hillard, the outstanding wildcat so far this year, provided considerable excitement last week when it came in with a spectacular McClosky flow estimated to be good for 2,500 bbl. daily. No. 1 Hillard, S½ SE SW 27-1n-6e, 5 miles west of production in the Clsne field, has not yet been completed but, on a 24-hour test the well made 1,968 bbl. under choke and hourly tests have shown that it is capable of producing approximately 115 bbl. an hour. The test is producing from McClosky pay discovered at 2,994-96 ft., where casing was perforated. Although the best looking pay was claimed to have been from 3,004-12 ft., it has not yet been tested. No offset locations have yet been staked but, in view of the big production, the area will probably undergo considerable development in the near future. Dorian et al 1 Logan School has already been staked a mile east in 25-1n-6e.

CLAY COUNTY.—Pure Oil Co. announced late last week that it will deepen B-3 Moseley to the Devonian for the first deep test in the producing areas of Clay County. No. B-3 Moseley, 4-2n-8e, is located approximately in the center of the big Clay City McClosky field. When first drilled last year, B-3 Moseley proved to be dry in the McClosky and was abandoned at a total depth of 3,118 ft.

New Tests Started In Woodlawn Area

Kingwood Oil 1 First National Bank of Woodlawn, semiwildcat in Jefferson County, prompted two offsets last week as it neared completion as a 180-bbl. Benoist sand well. Kingwood's test, located in SE SE SW 35-2s-1e, is ¾ mile from the Woodlawn field and is producing natural from the Benoist sand at 1,963-73 ft. Previous production has been with swab but the test is scheduled for a pump test soon.

New offsets to the Kingwood test are Eddie Self 1 Minnie Zinke, west of the discovery in NW SW 35-2s-1e, and Magnolia 1 Shirley, east offset in NW NW SE 35-2s-1e.

Excellent Devonian Saturation Reported at Louden Outpost

An extensive drilling campaign is expected to be under way soon in the southern and central part of the Louden field due to excellent Devonian saturation reported at Union Petroleum Products 5 Morrison, 8-7n-3e. The saturation reported at 5 Morrison is the first good saturation recovered in the Devonian in this part of the field and is about 2 miles southeast of the Jarvis Brothers Devonian test on the Yakey lease where the operators are still attempting to make a commercial producer.

The Morrison test is reported to be running higher structurally than the Yakey test. At least three breaks of pay have been recovered so far in the Devonian at 5 Morrison and coring is being continued. The saturated cores have been analyzed and have been reported to contain no water. Operators stated that it would probably be the latter part of the week before casing would be run as they are proceeding cautiously with their exploration. After the casing is run it will be perforated to all the probable pay breaks. No. 5 Morrison is the same test which 2 weeks ago discovered commercial production in the Aux Vases sand, a new pay zone for Fayette County.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Benton	6	1,438	12,851
Dale	2	1,549	6,001
Dundas	3	2,457	8,653
Inman	3	180	5,324
Louden	8	610	15,620
N. Enterprise	4	328	12,274
N. New Harmony	3	510	8,450
Other pools	19	1,549	42,311
Wildcats	2	279	5,433
Dry holes: Fields*	6	.....	13,937
Wildcats	8	.....	19,930
Total	64	.....	152,437
Gas-input wells	1	.....	1,635
Recompletions	9	1,145	.....

*Sailor Springs 1, Dahlgren 1, Patoka 1, Allendale 1, Barnhill 1, New Harmony 1.

WILDCAT COMPLETIONS

Edwards County: Smokey Oil 1 A. B. Chalcraft, W½ NE NW 19-2s-10e, dry at 3,425 ft., Paint Creek 3,138 ft., Benoist 3,148 ft., Renault 3,223 ft., Aux Vases 3,250 ft., Aux Vases sand 3,293 ft., Ste. Genevieve 3,314 ft., McClosky 3,357-62 ft., 3,392-3,415 ft.

Longhorn 1 Broster, SE SE SE 9-3s-14w, dry, Cypress sand 2,705 ft., Paint Creek 2,764 ft., Benoist 2,775 ft., Benoist sand 2,784 ft., Renault 2,837 ft., Aux Vases 2,871 ft., Aux Vases sand 2,908 ft., Ste. Genevieve 2,918 ft., old well deepened from 1,867-3,078 ft.

Franklin County: Bay Oil 1 D. Johnston, SE SW SE 17-6s-3e, dry at 2,222 ft., elev. 424 ft., No. 6 Coal 615 ft., Kincaid 1,762 ft., Clore 1,782 ft., Palestine 2,012 ft., Menard 2,065 ft., Waitersburg sand 2,101 ft., Vienna 2,141 ft., Tar Springs 2,200 ft., Tar Springs sand 2,220 ft.

Nation Oil 1 Beaty, NE SE NW 23-6s-2e, pumped 118 bbl. oil and 76 bbl. water, 14-qt. shot 2,129-35 ft., Tar Springs sand 2,130 ft., T.D. 2,144 ft. *Extends Benton pool ½ mile northwest.*

Hamilton County: Texas 1 Shasteen, E½ SE SW 27-6s-6e, pumped 161 bbl. from Aux Vases and Benoist, 20-qt. shot 3,069-77 ft., Benoist 2,956-84 ft., Aux Vases 3,054 ft., T.D. 3,289 ft., P.B. 3,116 ft.

Mid-Sun Oil 1 M. Hail, SE NW SW 19-4s-5e, dry at 3,521 ft., Golconda 2,796 ft., Barlow 2,902 ft., Cypress 2,924 ft., Cypress sand 2,968 ft., Paint Creek 3,050 ft., Benoist 3,093 ft., Ste. Genevieve 3,257 ft.

Lawrence County: Chet Evarts 1 Spiedel, NW NE NW 26-2n-12w, location abandoned.

Randolph County: Whitton et al 1 Inselman, SE SE NE 5-7s-5w, dry at 1,010 ft.

Ruwaldt 1 Schuette, NE NE SW 35-5s-5w, dry at 1,175 ft., Aux Vases 1,148 ft.

Wabash County: Hayes 1 Zimmerman, NW NW SE 36-1n-13w, pumped 10 bbl. oil and 30 bbl. water, 125-qt. shot 2,355-65 ft., old well P.B. from 2,580-2,368 ft.

Wayne County: New Penn Dev. 1 M. Bothwell, SW NW SE 18-2s-9e, dry at 3,507 ft.

Texas 1 Joe Lewis, S½ NE SW 5-3s-6e, dry at 3,570 ft.

Whiteside County: J. F. Morse 1 Sheldon, NW SW NW SE 11-19n-7e, dry at 1,500 ft., Niagaran 292 ft., Maquoketa 538 ft., Trenton 735 ft., Glenwood 1,063 ft., St. Peter 1,102 ft., Shakopee 1,187 ft., New Richmond 1,340 ft.

FIELD COMPLETIONS

Clay County

Clay City: Pure 1 R. Bayler, E½ NW SE 13-2n-7e, pumped 15 bbl. oil and 31 bbl. water, McClosky 3,031-34 ft., 3,060-65 ft., 3,067-69 ft., T.D. 3,070 ft., P.B. 3,050 ft.

Sailor Springs: C. Robinson et al 4 Tolliver, SE NE SW 26-4n-7e, dry at 2,346 ft., Menard 2,212 ft., Tar Springs sand 2,335 ft., T.D. 2,346 ft.

C. Robinson et al 5 Tolliver, NE NE SW 26-4n-7e pumped 150 bbl. oil and 30 bbl. water, 20-qt. shot 2,331-39 ft., Tar Springs sand 2,329 ft., pay 2,330-36 ft., T.D. 2,339 ft.

Effingham County

Mason: Luttrell 1 C. Mikaloitis, NE NW SW 27-6n-5e, pumped 144 bbl., 40 per cent water, 10-qt. shot 2,312-16 ft., Benoist 2,307 ft., T.D. 2,318 ft.

Fayette County

St. James: Ohio 15 Williams, SW NE SW 36-6n-2e, pumped 70 bbl., 8-qt. shot 1,614-19 ft., Cypress sand 1,610 ft., T.D. 1,619 ft.

Ohio 14 Williams, NW NE SW 36-6n-2e, pumped 49 bbl. oil and 3 bbl. water, 8-qt. shot 1,603-10 ft., Cypress sand 1,610 ft., T.D. 1,615 ft.

Louden: Carter 7 St. Pierre, NW SW SE 36-9n-3e, pumped 12 bbl. oil and 12 bbl. water, 30-qt. shot 1,617-27 ft., 50-qt. shot 1,555-66 ft., Cypress sand 1,520-31 ft., 1,534-64 ft., Benoist 1,616-30 ft., T.D. 1,630 ft.

Carter 1 Doty, SW SE SE 1-8n-3e, swabbed 84 bbl., 20-qt. shot 1,472-78 ft., Cypress sand 1,469-84 ft., T.D. 1,484 ft.

Carter 2-3 Algood, NW 2-8n-3e, gas-input well, 20-qt. shot 1,517-25 ft., 10-qt. shot 1,508-11 ft., Glen Dean 1,310 ft., Cypress 1,437 ft., Cypress sand 1,473 ft., T.D. 1,635 ft.

Carter 2 L. Dial, NE SE NE 12-8n-3e, pumped 22 bbl. in 22 hr., 20-qt. shot 1,555-62 ft., 10-qt. shot 1,549-52 ft., Cypress 1,509 ft., Cypress sand 1,522 ft., T.D. 1,562 ft.

Carter 2 Reeves-Miller, NE NW NE 12-8n-3e, swabbed 72 bbl., 20-qt. shot 1,466-74 ft., 10-qt. shot 1,456-59 ft., 20-qt. shot 1,462-70 ft., Cypress 1,422 ft., sand 1,452-83 ft., T.D. 1,485 ft.

Oil, Inc., 1-D Wood, W½ NE SE 16-8n-3e, pumped 80 bbl. oil and 75 bbl. water, natural, Devonian 3,064 ft., pay 3,144-51 ft., T.D. 3,164 ft.

Carter 12-D Wright, E½ NW NE 21-8n-3e, flowed 208 bbl. through 12/64-in. choke, 1,000 gal. acid, 2,000 gal. reacid, Devonian 3,065 ft., pay 3,109-19 ft., T.D. 3,146 ft.

Carter 7 Shaw, NE NE NE 17-7n-3e, swabbed 42 bbl. oil and 10 bbl. water, 30-qt. shot 1,574-84 ft., Paint Creek 1,578-84 ft., T.D. 1,575 ft.

Carter 8 P. Reece, SW SW SE 30-7n-3e, swabbed 126 bbl., 60-qt. shot 1,553-70 ft., Cypress sand 1,522-72 ft., T.D. 1,574 ft.

Franklin County

Benton: Shell 10 C. W. & F. "R-S," SE SE NW 36-6s-2e, pumped 360 bbl., 30-qt. shot 2,133-53 ft., Tar Springs 2,093 ft., T.D. 2,161 ft.

Shell 9 C. W. & F. "R-S," NE SW NW 36-6s-2e. pumped 275 bbl., 30-qt. shot 2,137-67 ft., Tar Springs sand 2,107-70 ft., T.D. 2,170 ft.

Cameron 1 Simpson heirs, SE SE SW 25-6s-2e, pumped 287 bbl., 50-qt. shot 2,117-30 ft., Tar Springs 2,100 ft., T.D. 2,139 ft.

Shell 10 Doty, S½ S½ N½ 25-6s-2e, pumped 158 bbl. oil and 5 bbl. water, 20-qt. shot 2,124-44 ft., Tar Springs 2,100 ft., T.D. 2,148 ft.

Adkins 7 Rice, E½ SE SE NW 25-6s-2e, pumped 208 bbl., 50-qt. shot 2,113-38 ft., Tar Springs 2,097 ft., T.D. 2,138 ft.

McBride 2 Chapman, N½ NE NW SE 23-6s-2e. pumped 150 bbl., 10-qt. shot 2,087-92 ft., Tar Springs 2,078 ft., T.D. 2,095 ft., P.B. 2,092 ft.

Gallatin County

Omaha: Carter 1 Jones, NE SW SW 4-8s-8e, pumped 49 bbl. oil and 20 bbl. water, 65-qt. shot 1,897-1,927 ft., 160-qt. shot 1,896-1,917 ft., Tar Springs sand 1,914-32 ft., T.D. 1,932 ft.

Inman: Phillips 10 Egyptian T. & T., SW NE NE 16-8s-10e, pumped 50 bbl., pumped off, 15-qt. shot 784-90 ft., saturated sand 781 ft., T.D. 790 ft.

Phillips 8 Egyptian T. & T., SW NE NE 16-8s-10e, pumped 100 bbl. oil and 196 bbl. water, 20-qt. shot 2,079-87 ft., Tar Springs 2,073 ft., T.D. 2,089 ft.

Buell-Herndon 2-A Egyptian T. & T., SE NW SW 15-8s-10e, pumped 30 bbl. oil and 10 bbl. water, 20-qt. shot 2,408-13 ft., Cypress sand 2,400-14 ft., 2,430-44 ft., T.D. 2,444 ft., P.B. 2,441 ft.

Hamilton County

Hoodville: Tide Water 2 Morris, SW NE SE 3-6s-6e, pumped 191 bbl. oil and 3 bbl. water, 10-qt. shot 3,074-81 ft., old well deepened from 3,075-85 ft.

Dale: Cameron Bros. 2 Mayberry, SW SW NE 7-6s-7e. pumped 925 bbl., 20-qt. shot on bottom, Aux Vases 3,004-21 ft., T.D. 3,021 ft.

Pure 7 Cuppy, SE SE SW 6-6s-7e, flowed 624 bbl., natural, Aux Vases 2,942 ft., T.D. 2,980 ft.

Dahlgren: Duncan 2 Zellars, NE NE NE 34-3s-5e pumped 153 bbl., 5,000 gal. acid, McClosky 3,320-35 ft., T.D. 3,337 ft.

Smith Pet 1 Zellars, SW SE NE 27-3s-5e, dry at 3,311 ft., base Pennsylvanian 2,150 ft., Menard 2,330 ft., Vienna 2,405 ft., Tar Springs 2,488 ft., Glen Dean 2,610 ft., Hardinsburg 2,655 ft., Golconda 2,710 ft., Cypress 2,841 ft., Paint Creek 2,979 ft., Paint Creek sand 2,986 ft., Benoist 3,023 ft., Renault 3,049 ft., Ste. Genevieve 3,180 ft., McClosky 2,293-96 ft.

Jefferson County

Dix: Pearson 2 Carpenter, NW NE SW 10-1s-2e, pumped 140 bbl., 10-qt. shot on bottom, Benoist 1,960 ft., T.D. 1,969 ft.

Marion County

Patoka: Adams O. & G. 9 Pugh, NE SW NE 29-4n-1e, dry at 1,592 ft., Benoist 1,440 ft., Rosiclare 1,574 ft.

East Patoka: Magnolia 4 Peddicord, NE SW SE 34-4n-1e, pumped 47 bbl. oil and 73 bbl. water, 2½-qt. shot 1,378½-79½ ft., 2-qt. shot 1,378-81 ft. Cypress sand 1,373 ft., T.D. 1,384 ft., P.B. 1,380 ft.

Shell 4 Headly, NE SW NE 34-4n-1e, pumped 108 bbl. oil and 19 bbl. water, 2-qt. shot 1,471-73 ft., Renault 1,460 ft., T.D. 1,473 ft.

Salem: Magnolia 23 J. R. Young, NW NW NW 29-2n-2e, pumped 40 bbl., Trenton 4,495 ft., old well deepened to 4,625 ft.

Texas 29 K. Wayman, SE NE NE 31-2n-2e, flowed 110 bbl., natural, Trenton 4,460 ft., old well deepened to 4,575 ft.

Richland County

Dundas: Pure 2 Utterbach "A," S½ SW NW 29-5n-10e, flowed 1,259 bbl., 1-in. choke, 5,000 gal. acid, McClosky 2,837-43 ft., T.D. 2,875 ft.

Pure 1 Delzell, E½ NE SE 30-5n-10e, flowed 1,190 bbl. McClosky 2,818-27 ft., 2,840-44 ft., T.D. 2,860 ft.

Pure 1 W. H. Holtz, W½ NE NE 7-4n-10e, pumped 8 bbl. oil and 9 bbl. water, 5,000 gal. acid, McClosky 2,883-89 ft., 2,897-2,900 ft., T.D. 2,918 ft.

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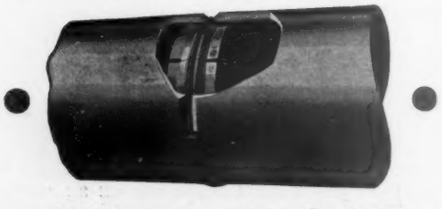

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Wabash County

Mount Carmel: Shell 5 Hein, N½ SW NE SE 18-1s-12w, pumped 104 bbl., 10-qt. shot 2,051-58 ft., Cypress sand 2,042-58 ft., T.D. 2,061 ft.
Stroube & Stroube 1 Gillem, NW NW NW SW 17-1s-12w, pumped 84 bbl., 15-qt. shot 2,058-72 ft., Cypress sand 2,056-68 ft., old well deepened to 2,072 ft.
Allendale: Jackson 3 Freeman, NE SE NE 36-2n-12w, pumped 100 bbl. oil and 100 bbl. water, 20-qt. shot 1,941-48 ft., Benoist 1,942 ft., T.D. 1,951 ft.
Joe Young 1-A Price, S½ NW SW SE 36-2n-12w, dry at 2,214 ft., P.B. 1,896 ft., Waltersburg sand 1,482 ft., Vienna 1,520 ft., Tar Springs sand 1,531-37 ft., Glen Dean 1,667 ft., Golconda 1,749 ft., Barlow 1,825 ft., Cypress sand 1,881 ft., Benoist 1,987 ft., Renault 2,043 ft., Ste. Genevieve 2,129 ft.

Washington County

Irvington Ohio 1 Poggenmoeller, SW SW SE 10-1s-1w, pumped 118 bbl., natural, Benoist 1,515 ft., T.D. 1,524 ft.

Wayne County

Barnhill: C. Robinson et al 1 Elliott-Haefele, E½ SW SE 26-2s-8e, dry at 2,360 ft., lost hole.
West Enterprise: Pure 1 R. B. Duke "A," N½ SW SE 1-1n-7e, pumped 23 bbl., 5,000 gal. acid, McClosky 3,008-10 ft., 3,019-23 ft., T.D. 3,043 ft.
North Enterprise: J. W. Sanders 1 Hosselton, SW NW SW 29-2n-8e, pumped 111 bbl. oil and 5 bbl. water, 5,000 gal. acid, McClosky 3,039-48 ft., 3,060-69 ft., T.D. 3,069 ft.
Pure 2 Hosselton "C," SW NE NE 31-2n-8e, pumped 72 bbl., 6,175 gal. acid, McClosky 2,991-96 ft., T.D. 3,025 ft.
Sanders 6 Hubble, NW NE NW 31-2n-8e, pumped 135 bbl., perf. 2,939-52 ft., Aux Vases 2,933-62 ft., 5,000 gal. acid, McClosky 3,038-44 ft., pumped salt water and slight show oil, T.D. 3,060 ft.
Pure 2 Hornbuckle, E½ NW SE 19-2n-8e, pumped 10 bbl. oil and 30 bbl. water, 5,000 gal. acid, Fredonia 3,010 ft., T.D. 3,120 ft.
Enterprise: Pure 2 J. Hubble, NE SE NE 5-1n-8e, pumped 44 bbl., 5,000 gal. acid, Ste. Genevieve 2,965 ft., pay 3,020-28 ft., T.D. 3,090 ft.

White County

New Harmony: White & Wilkerson 2 Finch, NE NE NE 7-5s-14w, dry at 2,114 ft., Waltersburg 2,282 ft., Glen Dean 2,431 ft., Golconda 2,510 ft., Barlow 2,618 ft., Cypress 2,622 ft., Benoist 2,754 ft., Benoist sand 2,774 ft., Renault 2,838 ft., Aux Vases 2,845 ft., Aux Vases sand 2,887 ft., Ste. Genevieve 2,916 ft., McClosky 2,980-86 ft., 3,004-12 ft.
North New Harmony: Superior 1 H. H. Ford, NW SW SE 28-4s-14w, pumped 90 bbl., perf. 2,708-30 ft., 2,664-76 ft., 2,618-28 ft., 2,578-2,602 ft., old well worked over, T.D. 2,925 ft.
Superior 3 Fitten "A," SW SW SE 28-4s-14w, pumped 220 bbl. in 22 hr., perf. 2,114-40 ft. in Waltersburg, perf. 2,552-98 ft. in Cypress, old well worked over, T.D. 2,730 ft.
Superior 13 Fitten "A," SE SW SW 28-4s-14w, pumped 110 bbl., 180-qt. shot 2,691-2,730 ft., perf. 2,570-94 ft., Cypress sand 2,573-2,613 ft., Benoist 2,684-37 ft., T.D. 2,730 ft.
Superior 4 Stanly, NW SW NW 27-4s-14w, pumped 250 bbl., 30 per cent water, 90-qt. shot 2,847-70 ft., 400-qt. shot 2,850-70 ft., acidized, alloy casing 2,590-2,605 ft., Cypress sand 2,591-2,606 ft., Benoist 2,724-36 ft., Aux Vases 2,841-53 ft., T.D. 2,870 ft., P.B. 2,610 ft.
Superior 13 H. C. Ford "C," SW NW SW 27-4s-14w, pumped 150 bbl., 140-qt. shot 2,814-45 ft., perf. 2,698-2,725 ft., 2,570-2,605 ft., Benoist 2,699-2,758 ft., Cypress sand 2,572-2,612 ft., Aux Vases 2,812-40 ft.
East Calvin: Paul Miller 5-A-1 Ford heirs, NE SW SW 16-4s-14w, pumped 62 bbl. in 19 hr., 125-qt. shot 2,840-55 ft., 30-qt. shot 2,840-55 ft., T.D. 2,855 ft.
South Griffin: Wabash O. & G. 4 Reeves heirs, NW NE SW 28-3s-14w, pumped 192 bbl., 50-qt. shot 2,562-82 ft., Cypress sand 2,560 ft., T.D. 2,582 ft.
Phillipstown: Phillips 4 Garr, SE SE SE 35-4s-10e, pumped 90 bbl., 75-qt. shot 2,958-77 ft., Rosiclare 2,956-76 ft., T.D. 2,977 ft.
Roland: Fisher & Arrow 1 Ellis, NE SW SE 11-7s-8e, flowed 400 bbl., 30-qt. shot 2,155-65 ft., old well worked over, T.D. 2,166 ft.
Sinclair 3 Mitchell, NW NW SE 11-7s-8e, swabbed 298 bbl., 10-qt. shot 2,168-74 ft., Waltersburg 2,159 ft., T.D. 2,174 ft.

ILLINOIS DRILLING REPORT

Adams County: R. Hussong 1 fee, SW NE SW NW 21-1s-6w, S.D. 600 ft.
Bond County: Republic 1 Mitchell, SW SE 28-6n-3w, first report, moving in machine.
Schwarz 1 Studebaker, SE SE SW 21-6n-2w, Hardinsburg sand 2,250 ft., Devonian 2,252 ft., sand 2,265-67 ft., sandy lime 2,315-17 ft., porous dolomite 2,330-60 ft., fishing 2,797 ft.
Woolsey 1 Sapp, NE NE SW 22-5n-4w, T.D. 640 ft., pumped 10 bbl. oil and 5 bbl. water, testing.
Christian County: W. Marlow 1 Howell, SE SE NE 26-15n-2w, S.D. 1,625 ft.
Clinton County: A. W. Gearson 1 Bilkhart, SW NW NW 22-1n-5w, Louisiana lime 2,066 ft., Chattanooga 2,081 ft., Devonian 2,104 ft., Trenton 2,955 ft., cored 3,017-34 ft., recovered 4 ft. bad lime, no show oil, T.D. 3,217 ft., P.B. 1,290 ft., will perf. in Salem.
Edwards County: National Pet. et al 1 Crackle heirs, NW NW SW 5-2s-14w, T.D. 3,150 ft., P.B. 2,872 ft., drilled out to 2,878 ft., to shoot.
Fayette County: Smokey 1 Boyce, SW SW NW 23-5n-2e, first report, elev. 567 ft., 8-in. 103 ft., drilling 1,000 ft.
Franklin County: Smokey & Eason 1 Moore, NE SW SW 14-6s-2e, first report, 10-in. 57 ft., drilling 870 ft.
Gallatin County: J. H. Wall et al 1 Mossman, S½ NW SW 7-9s-8e, first report, drilling 150 ft.
Ryan et al 1 Crunk, N½ NE NW SE 9-8s-9e, S.D. 2,880 ft.
Vanderbark 1 Browning, NW NW SE 10-8s-10e, Ste. Genevieve 2,707 ft., drilling 2,711 ft.
Hamilton County: Kingwood et al 1 Johnson, NE SE NE 14-6s-5e, first report, rig.
Ohio 1 First National Bank of Enfield, SE SE NW 3-5s-7e, T.D. 3,587 ft., Renault 3,320 ft., Ste. Genevieve 3,370 ft., Rosiclare 3,375 ft., Fredonia 3,395 ft., McClosky 3,450-60 ft., 5-in. 3,587 ft., waiting on cement.
Texas 1 C. Johnson, W½ NE NE 34-6s-6e, T.D. 3,040 ft., Cypress 2,746 ft., Benoist 2,874 ft., alloy casing 2,885-2,910 ft., Aux Vases 2,974 ft., 7-in. 2,975 ft., waiting on cement.
Henry County: O. Behrens 1 Patton, SE SE SW 1-17n-3e, drilling 1,000 ft.
Jasper County: J. P. Gordon 1 Snyder, W½ SE NW 36-7n-10e, first report, moving in rotary tools.
C. L. Ervin 1 Garner, SW NW SE 16-6n-8e, Bridgeport 970 ft., S.D. for casing 970 ft.
Jefferson County: Kingwood 1 Sledge, N½ SE SW 20-1s-4e, machine, first report.
Lawrence County: A. A. A. O. & G. 1 Pinkstaff, E½ NE SW 12-4n-11w, McClosky 1,500-02 ft., show dead oil 1,548-62 ft., S.D. 1,655 ft.
Midwest Dev. 1 Mullens, NW NW SE 15-2n-12w, set 12-in. 219 ft., drilling 812 ft.
Stocker & Kieffer 1 Rogers, NW SE SW 17-2n-12w, T.D. 1,235 ft., show dead oil 1,140 ft., running 10-in.
Macoupin County: Adams & Laegers 1 Bristow, SW SW SW NW 8-11n-7w, Ste. Genevieve 568 ft., Warsaw 860 ft., Burlington 995 ft., S.D. 1,435 ft.
Madison County: F. C. Kiskadden 1 G. A. Fischer, E½ SE SW NE 27-5n-8w, drilling 1,640 ft.
Alch & Carroll 1 Rinkel, SE NE NW 33-5n-6w, Devonian 1,780 ft., drilling 1,820 ft.
Marion County: Goodson et al 1 Smith, N½ NW NE SW 25-4n-1e, first report, drilling 1,418 ft.
Swan-King 1 Kotva heirs, S½ SW NW 36-4n-2e, drilling 3,399 ft.
Austin Oil 1 Smith, SE SE SW 12-3n-2e, T.D. 2,574 ft., 5,000 gal. acid in McClosky, P.B. 2,382 ft., waiting on cement.
Texas 1 McClelland, S½ SW NE 18-2n-2e, St. Louis 2,255 ft., Salem 2,355 ft., drilling 3,475 ft.
Perry County: Ruwaldt 1 Fulk, NE NE SW 15-4s-4w, first report, T.D. 1,450 ft., running electrical log.
Richland County: Texas 1 Shan, E½ SE NW 27-3n-9e, first report, rigging up rotary.
St. Clair County: Magnolia 1 M. Probst, SE SE SE 2-2s-9w, T.D. 1,352 ft., Trenton 1,349 ft., 6-in. 1,352 ft.
Saline County: Carter & Vaughn 1 Roberts, SE SW NE 6-8s-7e, S.D. 1,720 ft.
Tazewell County: Bartelmay 1 Mathis, SW NW SW 24-25n-3w, S.D. 1,511 ft.
Wabash County: Kennedy 1 Karch, S½ S½ SW 16-1s-12w, location, first report.
Joe Young 1-A Price, E½ NW NE SW 14-1n-12w, set 10-in. 680 ft., S.D. 1,150 ft.
White & Wickwire 2 Price, N½ NW NE SW 14-1n-12w, Waltersburg 1,538-50 ft., saturated, 5-in. 1,587 ft., Tar Springs 1,613 ft., 10-qt. shot 1,538-42 ft. in Waltersburg, tested 1½ bailers oil an hour, drilling 1,618 ft.
Wayne County: Pure 1 Liston "A," W½ NE NE 22-1s-8e, base Pennsylvanian 2,235 ft., Menard 2,325 ft., Glen Dean 2,567 ft., Hardinsburg 2,590 ft., Golconda 2,615 ft., drilling 2,677 ft.
Texas 1 F. M. Draper, N½ NW SW 8-3s-6e, Rosiclare 3,322 ft., Fredonia 3,334 ft., drilling 3,408 ft.
White County: Wall & Mitchell 1 Kershaw, SW SW NE 22-3s-10e, spud, first report.
First Nat. Pet. Trust 1 Johnson, NE SE NW 5-5s-14w, perf. 2,944-55 ft., swabbed water, no show oil, squeezed, swabbed 110 bbl. oil and 25 bbl. water, T.D. 2,980 ft., P.B. 2,977 ft., waiting on cement.
Neff et al 1 Union Central Life, NE NE SE 9-7s-10e, first report, rig.
Millison Bros. 1 M. P. Chandler, NW NW SW 30-5s-14w, lower Kincaid 1,977 ft., Clore 2,009 ft., Menard 2,205 ft., Tar Springs 2,360 ft., Glen Dean 2,428 ft., Golconda 2,555 ft., Barlow 2,668 ft., Cypress 2,673 ft., drilling 2,702 ft.
Whiteside County: J. S. Feltus 1 Hopkins, NW NE NE 35-21n-6e, S.D. 645 ft.

Oklahoma Fields

(Continued from Page 64)

Shell 1 Denny, SW SE NW 32-15-7, flowed 129 bbl., Prue 2,791-2,801 ft., T.D. 2,815 ft.
Shell 2 Jones, NE NW SW 32-15-7, flowed 101 bbl., Prue 2,830-46 ft., T.D. 2,866 ft.
Shell 5 Jones, NE SW SW 32-15-7, flowed 293 bbl., Prue 2,850-65 ft., T.D. 2,882 ft.
Summit 2 Fisher, NW SE 32-15-7, flowed 250 bbl., Prue 2,769 ft., 7-in. 2,769 ft., lime 2,810 ft., shot, T.D. 2,811 ft.
Tecumseh Lake, Pottawatomie County: Hall-Jordan 3 Pensoneau, SW SW SW 36-10-3, flowed 350 bbl., Wilcox 5,252 ft., 7-in. 5,251 ft., T.D. 5,272 ft.
Tussy, Carter County: Skelly 4 Miller, SE SW NE 5-1s-3w, flowed 241 bbl., casing pressure 400 lb., sands from 1,996-2,832 ft., reperf. 1,995-2,015 ft., 350 ft. 5-in. liner, gravity 27.8 at 82°, T.D. 2,950 ft.
Cox 6 Partons, SW NE SE 29-1n-3w, pumped 22 bbl., 7-in. 2,250 ft., T.D. 2,549 ft.
Velma, Stephens County: Amerada-Stanolind 1 Frensley, SW NW SW 25-1s-5w, pumped 2½ bbl., sand 789-804 ft., 5-in. 752 ft., perf. 657-61 ft., T.D. 805 ft.
Skelly 1 Martin, NW NW SE NW 36-1s-5w, old well drilled deeper, old T.D. 747 ft., sand 805-23 ft., T.D. 823 ft., 17 bbl.
Magnolia 30 Wilson, NW SW SW 1-2s-5w, pumped 8 bbl. oil and 3 bbl. water, sand 393-439 ft., 8-in. 382 ft., T.D. 442 ft.
Wagoner County, Goble pool, Schmidt 1-A Vernon, Sec. 13-17-15, dry, T.D. 1,072 ft.
North Wewoka, Seminole County: Stanolind 1 Davis, NW SW 33-9-8, pumped 34 bbl. oil and 5 bbl. water, Wilcox 4,342 ft., 5-in. 4,323 ft., shot 4,337-60 ft., T.D. 4,363 ft.

WILDCAT DRILLING REPORT

North and Central

Creek County: Williams 7 Steinman, NE NW NW 17-16-10, drilling 2,255 ft. in shale.
Zephyr 1 Sinclair, SE SE NW 34-17-8, Wilcox 3,658 ft., no show, P.B. 2,862 ft., ripped in Bartlesville 2,843 ft., H.F.W., P.B. 2,733 ft., ripped Red Fork 2,696-99 ft. and 2,732-35 ft., P.B. to Prue, ripped 2,374-77 ft., 2,370-73 ft., 2,360-70 ft., 2,343-50 ft., 2,334-37 ft., ½ bailer oil an hr., testing.
Garfield County: Gulf 1 Skilling, N½ NE NW 8-23-4w, drilling 5,800 ft. in lime.
Hughes County: Breen 1-A Cahill, E½ NE SW 2-6-8, lime 910 ft., sand 995-1,035 ft., drilling 1,151 ft.
Bailey 1 N. Williams, SW SW NE 14-9-10, 12½-in. 492 ft., drilling 925 ft.
Kay County: Alexander & Hauke 1-A Kreger, SE SE NE 4-25-2w, old T.D. 3,705 ft., Oswego 3,950 ft.,

Mississippi chat 4,355 ft., T.D. 4,487 ft., fishing for drill pipe.

Zephyr 1 Gingerich, SW SW SE 29-28-1w, first report.

Lincoln County: Allied Materials 1 Hicks, NW NW NW 25-13-6, Oswego 2,825 ft., Prue 2,835 ft., drilling 3,900 ft.

Dunnett 1 Luckenbill, SW SE SE 29-15-5, Hogshooter 2,465 ft., Checkerboard 2,760 ft., Oswego 3,475 ft., Prue 3,504 ft., show oil, 7-in. 3,502 ft., drilling 3,546 ft., est. 60-65 bbl. a day.

Thomas A Creekmore 1 Tipton, NW NW SW 23-15-5, set 10-in. 15 ft.

Logan County: Continental 1 Lenigar, SW SE SW 17-15-3w, Wilcox 6,219 ft., second Wilcox 6,392 ft., salt water, P.B. 6,265 ft., 7-in. 6,029 ft., flowed 100-105 bbl. a day and est. 3,500,000 cu. ft. gas, 2,200 lb. S.I. pressure.

Olson 1 Paulk, N½ NE SE 33-18-3w, drilling 4,640 ft.

Muskogee County: Pine 1 Lacey & Steele, SE NE NW 24-13-17, sand 1,746-86 ft., show oil, drilling 1,995 ft.

Okfuskee County: Walker & Sexton 1 Hilderbrandt, NW NE NE 19-10-11, sand 1,020-28 ft., H.F.W., 6⅝-in. 1,036 ft., lime 1,033-36 ft., some show gas, T.D. 1,036 ft.

Sam Vierson 1 Harper, NW NW NE 16-13-7, Woodford 4,001 ft., Hunton 4,039 ft., first Dutcher 3,580-90 ft., second Dutcher 3,610-20 ft., Pitkin 3,620 ft., cored Hunton lime 4,042-52 ft., some show oil and gas, drilling ahead.

Oklahoma County: Harper-Turner 1 Kunc, NW SW NW 33-14-2w, 10-in. 365 ft., drilling 2,540 ft.

Osage County: Black Jack 1 Osage, NE NE SW 29-25-7, T.D. 1,260 ft., underreaming 8-in.

Devonian 1-A Osage, SW SW NE 34-22-7, lime 602-10 ft., lime 627-35 ft., lime 665-85 ft., sand 690-97 ft., sandy lime 740-43 ft., shale and shells 743-55 ft., sand 760-72 ft., sand 776-81 ft., T.D. 805 ft., straightening hole.

Herman Madvine 1 Osage, NW NW SW 14-22-10, lime 484-90 ft., 8-in. 309 ft., lime 961-65 ft., sand 1,036-61 ft., sand 1,150-68 ft., some show oil, Big lime 1,368-87 ft., lime 1,395-98 ft., Oswego 1,439-60 ft., drilling 1,460 ft.

Norbla 1 Osage, SW SW NE 9-26-5, lime 600-05 ft., lime 665-75 ft., lime 695-720 ft., sand 810-30 ft., water, lime 845-50 ft., sand 870-910 ft., H.F.W., 12-in. 915 ft., lime 940-60 ft., lime 975-1,000 ft., drilling 1,138 ft.

Pawnee County: Sand Springs 1 Launer, SW SW SW 25-20-6, Mississippian chat 3,103-05 ft., T.D. 3,144 ft., swabbed 14 bbl. oil after being S.I. 6 days, pulling 10-in.

Payne County: T. N. Berry 1 fee, NW NE SW 13-18-3, Layton 2,670-2,770 ft., Checkerboard 2,970 ft., Cleveland 3,000-25 ft., sand 3,140-50 ft., sand 3,218-25 ft., S.D. 3,267 ft.

Pontotoc County: Cason 1 Adcock, SE NW NE 21-4-6, S.D. 925 ft., repairs.

Hughes-Thomas 1 Johnson, SW SW SE 26-4-5, first report, 8¼-in. 35 ft.

Pottawatomie County: Stanolind-Amerada 1 Rowan, NE NW SW 20-9-4, Hogshooter 2,805 ft., Wewoka series 3,380 ft., drilling 3,937 ft.

Manahan 1 Brown, SE SE SE 21-10-3, Oswego 4,410 ft., Prue 4,460 ft., dry, Verdigris lime 4,700 ft., Skinner 4,725 ft., Mayes 4,995 ft., Woodford 5,120 ft., Hunton 5,245 ft., Sylvan 5,254 ft., cored shale, sand and dry lime 5,240-57 ft., drilling 5,257 ft.

Seminole County: Michaelson 1 Ashbrook, SW SW NW 34-10-8, first report.

Southwestern

Atoka County: Matson 2 Rowland, SW NE NE 18-3s-10e, S.D. 620 ft. for repairs.

Caddo County: Texas 2 Smith, SE NW 2-5-12w, D.S. test 3,388 ft., flowed 125 bbl. in 55 min. from Simpson Bromide, blew out between 7-in. and 13⅜-in. casing from Hunton, est. 25,000,000 cu. ft. gas, perf. 2,240 ft., squeezed, Perf. 1,650 ft., squeezed, flowed 80 bbl. fluid an hr., est. 5 per cent oil, 2,400,000 cu. ft. gas through 7-in., killing well to drill in, T.D. 3,410 ft.

Olson 1 Ka-Way-Kia, SE NE NW 28-6-11w, drilling 4,580 ft. in Red Beds, no show oil or gas.

Cleveland County: Sinclair Prairie 1 Craig, NE NE SE 30-8-1w, Woodford 6,840 ft., Hunton 6,975 ft., drilling 7,080 ft.

Luther Mayer 1 McCommins, NW NE NE 15-10-1, Belle City 3,870 ft., Hogshooter 4,340 ft., Checkerboard 4,650 ft., Oswego 5,385 ft., Prue 5,420 ft., Hunton chert 5,683 ft., show oil in Hunton lime 5,704-11 ft., to core.

Delaney 1 Bandy, NW SE SW 13-7-2w, drilling 3,847 ft.

Cotton County: Taylor & Davis 1 Schussler, SE SE NE 14-6s-14e, cleaning out at 755 ft., T.D. 851 ft.

Jackson County: Kerbow & Britton 1 Moon, SE SW NE 31-1-19w, lime 2,195 ft., drilling 2,235 ft.

Jefferson County: Ray M. Johnson 1 Hefner, SE SW NE 30-3s-4w, S.D. 100 ft.

Gibson & Jennings 1 Wilson, NW NE 25-3s-5w, spud 60 ft., to rig up rotary.

Johnson County: Baldwin & Reed 1 Davis, S½ SW NW 8-2s-8e, 8¼-in. 1,540 ft., dolomite 1,835 ft., drilling 1,887 ft.

Kiowa County: Mathews-Lewis 1 Brazell, NE NE NE NE 33-7-17w, drilling lime 884 ft.

Kelly Wells 1-A Oster, SW NE NW 33-7-17w, show gas 498-505 ft., gas sand 587-92 ft., 600-10 ft., show oil 615-17 ft., drilling 777 ft., lime.

Thomasson 1 Baker, NW NE NW 7-6-18w, T.D. 690 ft., lost string of tools.

Hughes 1 Dugger, NE SW SW 14-6-18w, Red beds 95-590 ft., lime and Red beds 590-662 ft., parted 10-in. casing, S.D.

Badger & Grover 1 Clark, SW SW NE 19-7-16w, show gas 435-38 ft., conglomerate 800-24 ft., drilling lime 902 ft.

Love County: Magnolia 1 Watson, SW SE NW 12-7s-2e, sand 3,317 ft., cored broken, stained sand with salty taste 3,322-32 ft., sand 3,430 ft., cored tight brown sand, odor 3,440-50 ft., D.S. test 3,435 ft., recovered 20 ft. drilling fluid, sand 3,493 ft., cored sand, odor gas 3,498-3,513 ft., D.S. test 3,496 ft., recovered salt water, drilling 3,525 ft.

Batson 1 Walden, NE NW NW 34-6s-2e, T.D. 2,703 ft., 7-in. 2,169 ft., Viola 2,425-75 ft., perf. 1,741-53 ft., to test, shut off to recement.

Joe Baldwin 1 Hill, NW NW SE 26-8s-2e, drilling 1,465 ft., sand and shale.

Stephens County: Helmerich & Payne 1 Cryer, SE NE SW 33-2-5w, T.D. 6,795 ft., drill pipe stuck at 2,939 ft., fishing.

CANADIAN FIELDS

Southwest Extension to Turner Valley Indicated

By VICTOR LAURISTON

CHATHAM, Ont., July 12.—Crude and natural-gasoline production from all Alberta fields for the week ended June 30 averaged 25,842 bbl. daily, compared with 26,735 bbl. daily for the previous week and 22,945 bbl. for the corresponding week of 1940. The daily average included 24,970 bbl. of crude and 720 bbl. of natural gasoline from Turner Valley, 52 bbl. from the Steveville-Princess field, and 100 bbl. from other fields.

Two new wells on production, with aggregate of 1,515 bbl. daily, brought the total of producing wells to 171. The record showed 27 wells drilling, 2 finished awaiting test, 7 testing, 1 shut down, 1 new test spudded and 1 drilling license issued.

Turner Valley Quotas

For the purpose of conserving gas pressure for oil production, the Alberta Conservation Board has reduced the total natural-gas quota for the Turner Valley gas-cap area for July to 50,000,000 cu. ft. daily, a cut of 9,000,000 cu. ft. from the June quota. Because of a 25 per cent of open flow limitation, actual production will be 48,046,000 cu. ft. daily.

Turner Valley crude allowables for July total 806,000 bbl. or 26,000 bbl. daily, an allotment maintained since mid-January. The total comprises 511,500 bbl. conservation allotment and 272,955 bbl. extra war emergency allotment. Major producers include Home Oil 2, with 824 bbl. daily; Alberta Oil Incomes 2, with 685 bbl.; Home Oil 1, with 595 bbl.; Foothills Oil & Gas 5, with 550 bbl., and Home Oil 3, with 510 bbl.

Turner Valley Lime Tests

NORTH TURNER VALLEY.—Miracle Royalties 1, LSD 3, 4-21-3w5, finishing, Madison, 7,524 ft.

Major Oil 1, LSD 5, 34-20-3w5, T.D. 7,593 ft., P.B. 6,665 ft., temporary allowable while testing, 307 bbl. daily from upper zone.

Home Oil 7, LSD 14, 33-20-3w5, T.D. 8,630 ft., flowed up to 200 bbl. an hour after acidizing and testing, will be large producer.

Home Oil 8, LSD 16, 15-20-3w5, finishing in Madison below 8,402 ft.

Royalite Oil 47, LSD 15, 15-20-3w5, T.D. 8,826 ft., acidizing and testing.

Royalite Oil 56, LSD 12, 14-20-3w5, finished at 7,912 ft. after lime at 7,425 ft., acidizing and testing.

NORTH CENTRAL SECTION.—Empress Royalties 1, LSD 5, 2-20-3w5, standing cemented in lime at 8,684 ft.

WEST CENTRAL SECTION.—British American-Brown 2, LSD 2, 24-19-3w5, T.D. 8,395 ft. after lime at 7,396 ft., acidizing and testing.

Atlas Royalties 1, LSD 1, 24-19-3w5, T.D. 8,070 ft., testing between 200 and 250 bbl. daily.

British American-Brown 1, LSD 14, 13-19-3w5, below 8,285 ft. after lime at 8,178 ft.

Twin Valley Syndicate 2, LSD 10, 13-19-3w5, T.D. 8,470 ft., temporary allowable pending test 385 bbl. daily.

Sunray Petroleum Corp. 1, LSD 8, 13-19-3w5, T.D. 8,267 ft., temporary allowable pending test 489 bbl. daily.

Southwest Petroleums 5, LSD 2, 8-19-2w5, T.D. 6,955 ft., allowable 132 bbl. daily.

Anglo-Canadian Oil 9, LSD 14, 7-19-2w5, T.D. 7,589 ft., temporary allowable 235 bbl. daily.

Royalite Oil 55, LSD 7, 7-19-2w6, T.D. 7,643 ft., temporary allowable 185 bbl. daily.

SOUTHWEST FIELD. — Northwest-Hudson's Bay 5, LSD 10, 8-18-2w5, T.D. 8,487 ft., allowable 360 bbl. daily.

(Continued on Page 89)

It's a Fact — Johnston

THERE ARE OIL MEN WHO HAVE BEEN KNOWN TO SEE PINK ELEPHANTS ON OCCASIONS, BUT IN AUGUST, 1906, A WELL DRILLING IN THE LA BREA SECTION OF THE OLD LOS ANGELES FIELD GOT OUT OF CONTROL AND ACTUALLY BLEW A LARGE ELEPHANT SKELETON OUT OF THE HOLE!

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Wilcox Trend Play May Be Broadened By Southerly Test

By F. L. SINGLETON

NEW ORLEANS, La., July 14.—The Louisiana Gulf Coast sector of the Wilcox trend which has been limited to only a mild wildcatting play during the first 6 months of the year was placed in the limelight the past week as production tests were scheduled to be made on two deep tests in Beauregard Parish. One of these is an exploratory test in the Neale field, and the other a wildcat located on the Abbie Joe prospect in the southern part of the parish.

In view of its location and the depth from which it is scheduled to test, probably the most important from a geological viewpoint is Humble Oil & Refining Co. 1 Edgewood Land & Logging Co., located on the Abbie Joe prospect in 25-6s-10w. Total depth of the hole is 11,541 ft., where 7-in. casing was being cemented after sand showing oil was recovered in the Wilcox. The top of the section was logged at 11,316 ft. and the well attempted to blow out while drilling sand at 11,515-18 ft. After the pressure was controlled, shale was drilled from 11,518-37 ft., and in a core from 11,537-41 ft. 4 ft. of oil-sand showing good saturation was recovered. In view of the fact that the showing was encountered only about 200 ft. below the top of the section, it is possible that the hole may be deepened in search of deeper sands in the formation.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Fields	9	2,866	84,049
Dry holes: Fields	1	.....	2,960
Total	10	.....	87,009

The significant feature of the well is its structural position with relation to other Wilcox production. It is about 20 miles southeast of the Neale field, Beauregard Parish, some 75 miles southwest of the Eola field, Avoyelles Parish, and approximately 60 miles southwest of the Ville Platte field in Evangeline Parish. It is the most southerly located deep test ever drilled along the trend and its completion for a producer would open the deepest Wilcox production, and very definitely broaden the potentiality of the trend which up until the first of the year was generally believed to be limited to an updip depth of approximately 5,000 ft. and a downdip depth of approximately 9,000 ft.

Deeper Production Sought in Several Wilcox Fields

Atlantic Refining Co. was attempting to open production from a new sand in the Wilcox formation at the Neale field, Beauregard Parish, as 5½-in. casing was cemented on bottom at 11,175 ft. in 5 Musser-Davis, located on the south edge of the field. An electrical log is reported to have showed several small "kicks" at intervals from 9,500-11,175 ft. and the first test was being made through perforated casing at 10,880-96 ft. The Wilcox is topped in the field at approximately 8,340-60 ft. and production is from an average depth from 8,350-90 ft.

The above well is one of several exploratory tests now being drilled in proven Wilcox fields in hope of finding deeper production in the section. This was brought about by the discovery of deeper sand production at the Sheridan field, Colorado County, and more recently by the discovery of the Lake Creek field, Montgomery County, where production is being developed from two sands some 1,000 ft. to 1,500 ft. below the top of the Wilcox. Fields in which deep tests are being drilled include the Segno field, Polk County, Joes Lake fields, Tyler County, along the Texas coast, and the Eola field in Avoyelles Parish.

Moss Lake Wildcat Is Closely Watched

Pan American 1 Louisiana Farm & Livestock Co., a wildcat located on the Moss Lake prospect, Calcasieu Parish, was holding considerable attention as it drills below 9,280 ft. A 11-minute drill-stem test at 9,106-19 ft. recovered salt water with a slight show of oil. The well is located in 8-11s-9w in an area in which approximately six wells have been drilled. The acreage on which the well is located was a farmout to the company by Shell Oil Co., Inc.

Development of New Fields and Flank Pay Gets Started

Additional development was reported for the newly opened Bayou Sale field, St. Mary Parish, as Humble Oil & Refining Co. moved rig in for 1 Canal Bank & Trust Co. in 16-16s-9e, an offset to the discovery. Approximately 1 mile northeast of the pool opener, Harbor Oil Co. 1 State is reported to be drilling below 10,000 ft. although accurate information is not available since the well is being drilled extremely tight.

PINE PRAIRIE.—With the completion of a third producer in the newly opened deep sand on the east flank of the Pipe Prairie dome, additional development was being started. The new test is E. J. Nicklos 1 Reed, in the east half of the southeast quarter of Section 36, about 1,200 ft. west of Stanolind 1 Octave Ardoin. The latter well was completed during the week, and on an 11-hour gage it flowed 195 bbl. through various chokes. Tubing pressure was 1,450 lb. and casing pressure 1,435 lb. Total depth of the hole is 8,284 ft., and production is through perforated casing opposite oil sand at 8,223-38 ft. The completion extends production several hundred feet to the south.

EDGERLY FIELD.—Location for another southeast-flank test was announced for the Edgerly field, Calcasieu Parish, as Gulf Refining Co. moved in for 2 Miller estate in 27-9s-11w. The location is 680 ft. west of the company's, 1 Miller an 8,500-ft. dry hole which was quit after it showed for a producer. However, mechanical trouble developed and the well was later abandoned. Contract depth of the new test is 10,000 ft.

LAKE CATHERINE FIELD.—W. T. Burton 2 L.&N. R.R., the discovery well of the Lake Catherine field, Orleans Parish, continues to flow at the rate of 300 bbl. of 51.4-gravity oil per day through a ⅝-in. choke, but thus far no state potential gage has been made. The same operator is preparing to drill 7 State, which will be drilled by directional methods, and the bottom of the hole is to be approximately under the center of Unknown Pass, and 207 ft. south of the discovery well.

LOUISIANA GULF COAST COMPLETIONS

Fields

Bayou Blue, Iberville Parish: Navarro 6 Wilbert Minerals Co., dry, T.D. 2,960 ft.

Golden Meadow, La Fourche Parish: Brown-Wood 2 Dr. P. H. Hanley, 196 bbl., 10/64-in. choke, T.D. 5,510 ft., P.B., T.D. 5,445 ft.

Iowa, Calcasieu Parish: Magnolia 8 Wait, 75 bbl. oil plus 80 per cent salt water, 11/64-in. choke, T.D. 8,276 ft., P.B., T.D. 7,415 ft.

Leesville, La Fourche Parish: Texas 82 L.L.&E., 568 bbl., ¼-in. choke, perf. casing 9,025-40 ft., T.D. 9,700 ft.

Paradis, St. Charles Parish: Texas 11 L. L. & E. Paradis, 875 bbl., ¼-in. choke, perf. casing 10,295-10,325 ft., T.D. 10,490 ft.

Pine Prairie, Evangeline Parish: Titanic 1 Wexler, 389 bbl., 10/64-in. choke, perf. casing 8,105-20 ft., T.D. 8,228 ft.

Section 28 Dome, St. Martin Parish: Superior 2 E. C. Stuart, 291 bbl., 13/64-in. choke, perf. casing 10,854-86 ft., T.D. 11,302 ft.

Venice, Plaquemines Parish: Tide Water 10 Buras Levee Board, 204 bbl., ⅛-in. choke, perf. casing 10,370-10,420 ft., T.D. 10,758 ft.

Ville Platte field, Evangeline Parish: Continental 1 J. E. Vidrine, 214 bbl., 18 hr., ⅛-in. choke, perf. casing 9,794-9,830 ft., T.D. 10,106 ft.

West Hackberry, Cameron Parish: Stanolind 59 State Kelso, 54 bbl., ⅛-in. choke, T.D. 9,679 ft.

LOUISIANA GULF COAST WILDCATS

Allen Parish: W. T. Burton 1 Calcasieu National Bank, 21-5s-3w, drilling shale 5,397 ft.

Avoyelles Parish: Joe Humphrey 1 Pearl Frazee, 6-3n-3e, T.D. 2,499 ft., 10¾-in. casing 721 ft.

(Continued on Page 85)

Extension of East Premont May Speed Development

By F. L. SINGLETON

CORPUS CHRISTI, Tex., July 14.—A new sand discovery and an important extension to the East Premont field, Jim Wells County, cementing of casing in a deep Wilcox test in Webb County, and the favorable showing of an important outpost well on the west flank of the Stratton field, Nueces County, were the highlights of development in the Southwest Texas district the past week.

Production in the East Premont field, Jim Wells County, was apparently extended 1 mile west as Sun Oil Co. was preparing to test 1 Canales following a drill-stem test that recovered pipe-line oil in a new sand. A 20-minute test at 5,197-5,204 ft. tested 84 lb. working pressure and recovered 970 ft. of 37.2-gravity oil. Clean oil sand was cored at 5,204-08 ft., shale from 5,208-10 ft., the total depth, and 5½-in. casing was cemented following the running of an electrical log.

East Premont has been generally recognized as one of the most important discoveries to be found along the Frio-Vicksburg trend. Although the field was discovered several years ago, development has been slow in view of the fact that production heretofore has been largely confined to the large Seeligson ranch which is practically controlled by Magnolia Petroleum Co. A number of sands in the Frio-Vicksburg have been proven productive and the limits of the field are still undefined in several directions.

The Sun well is located in Section 182 of the Andrew Canales Survey and about 1 mile northwest of Transwestern 1 Dunlap. The latter company is engaged in testing 2 Dunlap at a total depth of 6,796 ft. The present well is about ½ mile east of 1 Dunlap, a gas-distillate producer.

Flank Test at Stratton Is One of Several Likely Tests

Operators interested in flank development around the Stratton field, Nueces County, were watching the progress of Sam E. Wilson 1 Union Central Life Insurance Co., located about 2,500 ft. northwest of Gulf Peins 2 Union Central in Section 2. A 4½-minute drill-stem test at 5,170-84 ft., tested 325 lb. working pressure and recovered 60 ft. of distillate-cut mud with a slight oil color, while another 4-minute test at 5,481-5,513 ft., tested 300 lb. working pressure and recovered 150 ft. of gas-cut mud. The well is coring ahead in shale below 5,513 ft.

WEST CHAPMAN RANCH.—In the same county, and located 1,320 ft. due east of the newly opened West Chapman ranch field, Seaboard 10 Chapman is drilling in shale below 5,010 ft. following a 3-minute drill-stem test at 4,244-69 ft. which tested 500 lb. working pressure and recovered 15 ft. of mud. The discovery sand was cored at 4,239-49 ft., but no drill-stem test was attempted although the section was logged as firm sand with a good oil odor. The well is scheduled to be drilled to a depth of 7,000 ft., and if no deeper sands are cored, the hole will be plugged back and a test made of the 4,200-ft. section which is identified as the Catahoula. The discovery well, 9 Chapman, completed as a pumping well the previous week, is reported to be showing 10 per cent salt water.

WILCOX TESTS.—Although no details were available, Magnolia Petroleum Co. has cemented 7-in. casing in 1-A Hamilton, a Wilcox test located in Webb County. Casing was cemented on bottom at 9,179 ft., and the well is expected to be drilled deeper. The well has been drilled tight, and no shows of oil or gas have been reported. Another Wilcox test on which little information is available is H. R. Cullen 3 Washburn located in the Washburn field, La Salle County, last reported as drilling below 10,100 ft.

STARR COUNTY.—In Starr County, Sun Oil Co. was attempting to link the Sun and North Rincon fields as 1 Magee, midway between the two fields was bottomed at 5,478 ft., and 5½-in. casing was cemented at 4,708 ft. preparatory to completing in sand at 4,600 ft. where a recent drill-stem test recovered gas-cut drilling mud and showed considerable gas pressure.

WEBB COUNTY.—W. C. McBride, Inc. 1 De la Garza, a wildcat located in Survey 675, Webb County, is bottomed at 2,409 ft., and casing is being cemented for testing following a 75-minute drill-stem test at 2,339-50 ft. which tested 40 ft. of drilling mud slightly cut with oil. The well is situated about 7½ miles north of Bruni.

BLOOMINGTON FIELD.—In the Bloomington field, Victoria County, an extension of 1,800 ft. northeast was promised by the showing of Gulf 1-B Noble which recovered 1,680 ft. of 37-gravity oil on a drill-stem test at 5,856-64 ft., the total depth. Only limited amount of drilling has taken place in the field in view of the fact that most of the early wells drilled on the structure were completed as gas-distillate wells. The completion of a good crude producer is expected to revive development.

SUMMARY OF COMPLETIONS

Lower Gulf Coast District

	No.	Bbl.	Footage
Oil wells: Fields	11	1,183	58,742
Dry holes: Fields	1	.....	5,265
Wildcats	1	.....	5,610
Total	13	.....	69,617

South Central Texas

	No.	Bbl.	Footage
Oil wells: Fields	3	64	4,133
Dry holes: Fields	1	.....	2,363
Total	4	.....	6,496

Southwest Texas District

	No.	Bbl.	Footage
Oil wells: Fields	11	1,298	39,068
Gas wells: Fields	2	.....	4,094
Dry holes: Fields	4	.....	15,668
Wildcats	4	.....	14,131
Total	21	.....	72,961

SOUTHWEST TEXAS COMPLETIONS

LOWER GULF COAST

Wildcat

Victoria County: Spencer & Huck 1 Angerstein, dry, T.D. 5,610 ft.

Fields

Agua Dulce, Nueces County: S. E. W. Oil Corp. 1 Pfluger, 157 bbl., ⅛-in. choke, perf. casing 7,102-16 ft., T.D. 7,161 ft.
Stanolind 1 Weinert, 319 bbl., ¼-in. choke, perf. casing 6,465-70 ft., T.D. 6,502 ft.
Clara Driscoll, Nueces County: Texas Conservative 5 Hule, 66 bbl., jetting, perf. casing 5,439-44 ft., T.D. 5,450 ft.
East Alice, Jim Wells County: Henshaw 1 Clark, 48 bbl., 3/32-in. choke, perf. casing 5,385-90 ft., T.D. 5,402 ft.
Midway, San Patricio County: William F. Morgan 4 Schmidt, 53 bbl. oil and 11 bbl. salt water, 3/32-in. choke, perf. casing 5,320-25 ft., T.D. 5,335 ft.
Minnie Bock, Nueces County: Graham Oil Co. 2 Dugger, 82 bbl. oil and 15 bbl. salt water, ¼-in. and ⅞-in. choke, perf. casing 3,805-09 ft., T.D. 3,851 ft.
Odem, San Patricio County: Wellington 1-C Welder, 52 bbl., ⅛-in. choke, perf. casing 5,430-36 ft., T.D. 7,220 ft.
Orange Grove, Jim Wells County: Cities Service 4 Schuenemann, dry, T.D. 5,265 ft.
Premont, Jim Wells County: McCartney 1 Seeligson Unit 5, 50 bbl. 15 hr., jetting, perf. casing 3,706-16 ft., T.D. 3,935 ft.
Richard King, Jim Wells County: Southern Minerals 22-B King, 32 bbl., ⅛-in. choke, perf. casing 5,650-53½ ft., T.D. 5,655 ft.
West Alfred, Jim Wells County: Rowan & Hope 8 Adams, 162 bbl., ⅛-in. choke, perf. casing 4,671-79 ft., T.D. 4,681 ft.
West Chapman, Nueces County: Seaboard 9 Chapman, 162 bbl., pumping, perf. casing 4,270-75 ft., T.D. 4,550 ft.

SOUTHWEST TEXAS

Wildcats

Duval County: J. W. Owens 1 Carrillo, dry, T.D. 4,507 ft.
Jim Hogg County: Plymouth 1 O. F. Sweeney, dry, T.D. 5,601 ft.
Live Oak County: Brauer, Beacham et al 1-C Atkinson, dry, T.D. 289 ft.
Webb County: Magnolia 1 Lopez, dry, T.D. 3,734 ft.

Fields

Charamousca, Duval County: N. V. Duncan 2-A Worden & Drought, 300 bbl., 19 hr., ⅝-in. choke, perf. casing 1,527-37 ft., T.D. 1,584 ft.
Colorado, Jim Hogg County: Humble 22-B King, 146 bbl., ⅞-in. choke, T.D. 3,016 ft.
Glen, Zapata County: Jay Simmons 7 Yeager-Stroman, dry, T.D. 2,257 ft.
Hoffman, Duval County: Cox, Hamon 3 Casas, dry, T.D. 3,310 ft.
Holbein, Jim Hogg County: Guy A. Davis 2-A McLean, 20 bbl., pumping, T.D. 2,807 ft.
Lundell, Duval County: Government Wells Oil Co. 50 Lundell, gas well, T.D. 1,545 ft.
Manila, Jim Hogg County: Magnolia 51 Merchants, gas well, perf. casing 2,543-46½ ft., T.D. 2,549 ft.
Oakville, Live Oak County: Moore Development Co. 4 McGriff, 30 bbl. oil and 70 bbl salt water jetting, sand 2,128-38 ft.
North Rincon, Starr County: Sun 5 Coates, dry, T.D. 4,549 ft.
Rincon, Starr County: Continental 25-A Slick, 56 bbl., ¼-in. choke, perf. casing 3,986-94 ft., T.D. 4,360 ft.
Continental 28-A Slick, 188 bbl., ⅞-in. choke, perf. casing 3,740-62 ft., T.D. 4,230 ft.
Continental 50-B Slick, 99 bbl. 19 hr., ⅞-in. choke, perf. casing 3,882-96 ft., T.D. 4,299 ft.
Continental 68-B Slick, 205 bbl., ⅞-in. choke, perf. casing 3,787-98 ft., T.D. 4,275 ft.
Continental 9-B Slick, 87 bbl., 13 hr., ⅞-in. choke, perf. casing 3,636-51 ft., T.D. 4,141 ft.
Sam Fordyce, Starr County: Phillips 4 Elizondo, 70 bbl., 3/32-in. choke, perf. casing 3,477-80 ft., T.D. 3,350 ft.
Sun, Starr County: Humble 6 Montalvo, dry, T.D. 5,552 ft.
Sun 9-A Montalvo, 97 bbl., ⅛-in. choke, sand 4,864-68 ft.

SOUTH CENTRAL TEXAS

Fields

Elm Creek, Guadalupe County: J. E. West 2 Brietzke, 4 bbl., pumping, sand and shale 816-50 ft.
J. E. West 4 Lenz, 10 bbl., pumping, sand and shale 711-803 ft.

(Continued on Page 85)

Kentucky Fields

(Continued from Page 62)

No. 615 A. H. Blackburn, Jones Creek in Pike County, 2,825 ft., shale, 712,000 cu. ft. gas.
No. 616 Lark Slone, Jones Fork in Knott County, 2,857 ft., 84,000 cu. ft. gas, shale, R.P. 418 lb.
No. 625 Ben Burga, Daniels Creek in Floyd County 1,571 ft., 582,000 cu. ft. gas, Big lime.
No. 5302 James W. Bevins, Sloane Branch in Pike County, 220,000 cu. ft. gas, shale.
No. 5315 Richard Hall, Knott County, 307,000 cu. ft. gas, shale, R.P. 345 lb.
Magoffin County: Inland Gas Corp. 117 T. B. Whitaker 1,544 ft., Big lime.

Drilling Report

Johnson County: Inland Gas Corp. 224 John Horne, on Rockhouse Creek, 1,020 ft., Berea grit.
Knott County: Inland Gas Corp.: 220 Hindman Settlement School, Smith Branch of Carr Creek, 2,884 ft. in brown shale.
Kentucky-West Virginia Gas Co. 5306 Levisa Thacker, Mill Creek, 1,843 ft., Big lime.
Kentucky-West Virginia Gas Co. 5308 William Triplett, Long Fork of Johns Branch, 1,798 ft., black lime.
Kentucky-West Virginia Gas Co. 5312 A. Johnson 1,990 ft., Big lime.
Floyd County: Kentucky-West Virginia Gas Co. 623 Nelson Boyd, Hunts Fork of Frazier Creek, 2,190 ft., Sunbury shale.
Kentucky-West Virginia Gas Co. 629 Joseph Hall, 1,863 ft., Big lime.
Kentucky-West Virginia Gas Co. 630 J. W. Bates, 2,010 ft., Big lime.
Kentucky-West Virginia Gas Co. 5301 James C. Jones, 1,718 ft., Salt sand.
Kentucky-West Virginia Gas Co. 5314 A. R. Music, 1,822 ft., Berea.

WESTERN KENTUCKY

Butler County

Silver City district: Billy Phillips 6 Martha Hawes, 10 bbl., Jones sand, 509-30 ft.
Huntsville district: Cumberland 7 Ora Brown heirs, drilling at 300 ft.

Daviess County

Handyville district: Teller 6 E. F. Lebold, 99-acre tract, completed in Jett sand, key well 1,247-74 ft.
Teller 1 W. G. Crabtree, rigging up.
Utica district: Creek Drilling Co. 12 Gus Morgan, drilling at 300 ft.
Pleasant Ridge district: Daugherty 5 W. A. Hewlett, 10 bbl., 20-qt. shot, stray sand, 695-704 ft., T.D. 710 ft.

McLean County

Northwest Livermore district: Sam Malis 1 Ora Bartimus, 35 bbl., 120-qt. shot, Jones sand, 1,351-69 ft.
Glenville district: Ohio 8 G. P. McManama, Account 2, rigging up to deepen to McClosky, old T.D. 1,080 ft.

Ohio County

Pleasant Ridge district: Wilkie & Massie 2 Addie Westerfield, 20 bbl., 60-qt. shot, Jett sand, 830-50 ft., T.D. 856 ft.
Wilkie & Massie 3 Addie Westerfield, rigging up.
Beda district: Miller & Steele 1 William Carson, abandoned at 203 ft.
Taffy district: Mecca 32 Cora Wells, dry hole, T.D. 1,051 ft.

Second Modelo Zone Proved In Oak Canyon District

By L. P. STOCKMAN

LOS ANGELES, Calif., July 14.—Western Gulf Oil Co. has completed 2 Lechler in the Oak Canyon field flowing 720 bbl. of clean 31.9-gravity oil and 600,000 cu. ft. of gas per day and in doing so proved the second Modelo zone of Miocene age as highly productive and Fred Jasper has completed 1 Videgain on the San Martinez anticline flowing 550 bbl. of clean 31.2-gravity oil and 850,000 cu. ft. of gas daily from the Modelo. Both of these wells showed production possibilities within the past 2 weeks but Gulf's deep test at Oak Canyon went to water during a preliminary production test and Jasper decided to make a little additional hole before finally finishing his well. Jasper drilled ahead to 6,078 ft. but went into a gray water sand and was forced to plug back to 5,994 ft. where a satisfactory shut off was effected. Jasper's completion of 1 Videgain in 17-4n-17w proved up the existence of a new oil field west of the Del Valle oil field discovered by R. E. Havenstrite. Western Gulf, in completing 2 Lechler, proved up the existence of a highly productive zone below the shallow zone in which the discovery well was finished a few months ago. Both completions will lead to additional drilling by operators holding nearby acreage but from present indications drilling will be along normal lines.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: San Joaquin Valley	6	3,040	33,363
Coastal district	9	5,152	45,742
Los Angeles Basin	5	1,369	25,042
Dry holes: Wildcats	2	.....	18,396
Fields	1	.....	2,206
Total	23	.....	124,749

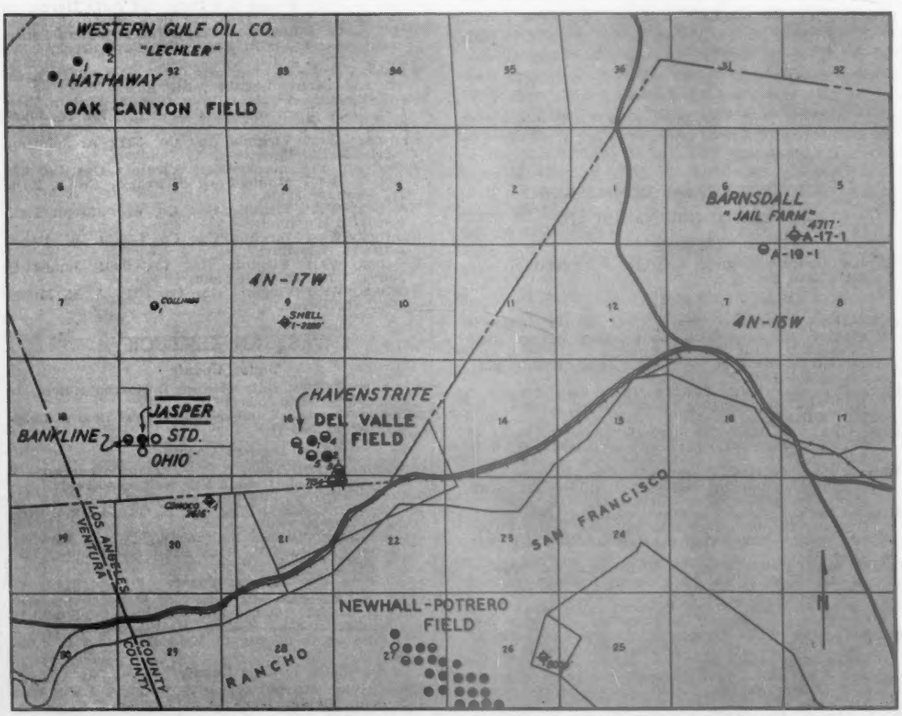
The Newhall-Castaic region is expected to become the most active single section of the state before the close of the current year. This area has been alternately hot and cold during the past year but now appears almost sure of becoming quite active. There is practically no property unleased at present although a considerable portion is held by speculators who have no intention of engaging in immediate drilling. Each new discovery, however, increases interest in the area and as time goes on many of the numerous anticlines existing in the Newhall-Castaic area will be tested by actual drilling. Barnsdall Oil Co. is drilling ahead at 7,275 ft. in its second wildcat on the jail-farm lease which it secured last year but has not yet logged enough oil sand to justify the expectation of developing commercial production. Texas Co., which is drilling a wildcat on the Pico anticline on the Whitman property in 14-3n-16w, will soon start drilling operations on the southern end of the Halsey anticline in conjunction with Dominguez Oil Fields Co. on a fifty-fifty basis. This area is west of Barnsdall's jail-farm property and northeast of the Del Valle field.

New Wells Scheduled in Santa Maria Valley

The Santa Maria Valley field is again becoming very active and new wells are scheduled to be started by Joseph Anderson on the Fairfield lease; Capitol Co. on the Twitchell property; George F. Getty, Inc., on the Vicente lease; Master Oil Co. on the Connor lease, and Palm Oil Co. on the Bill, Jr., lease. Hancock will start new drilling projects on the Bradley, California Lands, Hopkins, Rosenblum, and Wylie leases and A. N. Macrate has scheduled early operations on the Fernandez lease involving five new wells. Pacific Western Oil Co. will drill the Hobbs and Samarin leases and Signal Oil & Gas Co. will develop the Newlove and Romalho properties. Union Oil Co., discoverer of the Santa Maria Valley field, is running two strings of tools at present and is making plans to start drilling operations on the Bradley lands, Mahoney and McCoy-Cooney leases as well as additional wells on the Battles and Moreiti leases. There is considerable undrilled acreage in the Santa Maria Valley field and recent leasing along the south edge indicates a possibility of additional acreage being opened up.

Rincon Deep Test Held Up

In the Rincon field of Ventura County, Chanslor-Canfield Midway Oil Co. is still held up with mechanical trouble in 9-C Hobson, a deep test in 17-3n-24w, at 9,337 ft. This well, which has shown evidence of having found a deeper productive sand in the field, is held up with stuck tubing. This is the most important well drilled in the Rincon field since its discovery because it will lead to a deepening campaign if successfully completed. This field has only been of minor consequence and if another deeper zone is found it will enable operators to redrill and deepen a number of upper-zone wells that have reached the pumping stage. The Rincon field is located at the extreme western end of the Ventura Avenue anticline which extends westward from the Ventura Avenue field and plunges beneath the Pacific Ocean at Rincon. Productive area of Rincon extends along the upland above the tide line and eastward into the Rincon Hills where topography is rather rough although the elevated area does not reach more than a few thousand feet above sea level. The Rincon tideland area at one time contained the only drilling and producing island in the state but high tides and constant battering resulted in its collapse a few years ago. This island was built out in the water in order to develop a tideland lease and had no connection with the shore line. All material was barged in from Los Angeles Harbor.



Western Gulf Oil Co. proved up a new deep productive zone in the Oak Canyon field and Fred Jasper discovered a new oil field on the San Martinez anticline west of Del Valle field this week. Standard, Ohio and Bankline Oil Co. have already started offsets to Jasper's new discovery

COASTAL DISTRICT COMPLETIONS

Newhall-Potrero, Los Angeles County: Barnsdall 22 R.S.F., 27-4n-17w, flowed 1,285 bbl., 32.5-gravity, 0.3 per cent cut, 795,000 cu. ft. gas, 32/64-in. bean, pressures 535/550 lb., T.D. 7,279 ft., perf. 7,022-7,277 ft., completed in third Modelo zone of Miocene age.

Oak Canyon, Los Angeles County: Western Gulf 2 Lechler, 31-5n-17w, flowed 720 bbl., 31.9-gravity, 1 per cent cut, 300,000 cu. ft. gas, 38/64-in. bean, pressures 250/500 lb., T.D. 7,187 ft., P.B. 6,940 ft., completed in probable base of Modelo formation of Miocene age, proves up second and more productive zone in Modelo.

Rincon, Ventura County: Richfield 3 Hobson, 8-3n-24w, flowed 150 bbl., 29.1-gravity, 3 per cent cut, 150,000 cu. ft. gas, 20/64-in. bean, pressures 150/500 lb., T.D. 4,750 ft., P.B. 4,520 ft., cleaned out to 4,476 ft., perf. 4,420-65 ft., completed in Hobson zone of Pliocene age.

Santa Barbara Mesa, Ventura County: Transoceanic Oil Co. 7 M'dvani, 28-4n-27w, abandoned, T.D. 2,206 ft., no showings of importance.

Santa Maria Valley, Santa Barbara County: Union 3 Battles, 24-10n-34w, flowed 1,342 bbl., 16.2-gravity, 0.5 per cent cut, 402,000 cu. ft. gas, 32/64-in. bean, pressures 250/800 lb., T.D. 2,715 ft., perf. 2,202-2,712 ft., bottomed in Franciscan basement, producing from Santa Maria zone of Miocene age.

Union 3 McCoy and Cooney, 27-10n-34w, pumped 10 bbl., 16.1-gravity, 10 per cent cut, T.D. 5,215 ft., P.B. 5,109 ft., perf. 4,410-5,080 ft., completed in Santa Maria zone of Miocene age.

San Martinez, Los Angeles County: Fred Jasper 1 Videgain, 17-4n-17w, flowed barefoot 550 bbl., 31.2-gravity, 3 per cent cut, 850,000 cu. ft. gas, 38/64-in. bean, pressures 300/700 lb., T.D. 6,078 ft., P.B. 5,994 ft., perf. 5,884-5,994 ft., completed in Modelo zone of Miocene age, opens up probable new field west of Del Valle field.

Shiells Canyon, Ventura County: Field Gasoline Corp. 4-B Calumet, 3-3n-19w, pumped 430 bbl., 34.9-gravity, 1 per cent cut, T.D. 2,944 ft., P.B. 2,838 ft., perf. 2,481-2,688 ft., 2,718-48 ft., 2,808-38 ft., completed in Shiells zone of Pliocene age.

Temulac Oil Co. 1 Calumet, 3-3n-19w, pumped 145 bbl., 33.9-gravity, 5 per cent cut, T.D. 2,880 ft., perf. 2,605-2,880 ft., completed in Shiells Canyon zone.

Ventura Avenue, Ventura County: Shell 137 Taylor 30-3n-23w, flowed 520 bbl., 30.8-gravity, 3 per cent cut, 800,000 cu. ft. gas, 36/64-in. bean, pressures 300/500 lb., T.D. 7,628 ft., P.B. 7,507 ft., perf. 6,668-7,083 ft., 7,165-7,505 ft., completed in 57 zone of Pliocene age.

COASTAL DISTRICT WILDCATS

Aliso Canyon, Los Angeles County: Associated 1 Mission, 26-3n-16w, rig and equipment.

Castaic district, Los Angeles County: Barnsdall 1-19-A Honor Rancho, 7-4s-16w, drilling 7,275 ft. in gray sand and shale, elev. 1,244 ft.

Del Valle district, Los Angeles County: R. E. Havenstrite 4 Lincoln, 16-4n-17w, drilling 3,684 ft. in sand and shale, elev. 1,285 ft.

Elwood district, Santa Barbara County: Barnsdall-Rich field 88-11 State, tideland, drilling 3,550 ft., top Vaqueros 3,141 ft., elev. 21 ft.

Loma Grande district, Monterey County: Loma Grande Oil Co. 1 Corey, 23-24s-10e, T.D. 3,790 ft. in shale, fishing drill pipe, elev. 1,500 ft.

Los Flores district, Santa Barbara County: Standard 2 Los Flores, 27-9n-33w, drilling in sand and shale 6,002 ft., elev. 1,084 ft.

Newhall district, Los Angeles County: Aztec Oil Co. 1 Sanborn, 6-3n-16w, T.D. 4,300 ft. in sandy shale, to move in heavier equipment, elev. 1,516 ft.

St. Anthony Oil Co. 1 La Salle, 10-3n-16w, drilling in sand 3,284 ft., elev. 1,480 ft.
Tunnel Oil Co. 1 Needham, 13-3n-16w, graded road and location, expect production around 1,550 ft. elev. 1,681 ft.
Texas 1 Whitnah, 14-3n-16w, T.D. 4,999 ft., P.B. 3,664 ft., testing interval 3,275-3,648 ft., located on major Pico anticline, elev. 1,934 ft.
Rincon, Ventura County: C.C.M.O. 9-C Hobson, 17-3n-24w, drilled to 9,338 ft. in sandy shale with streaks of oil sand, lost swab, found tubing stuck, flows occasionally during fishing operations, this is deepest well drilled in field to date, elev. 49 ft.
San Martinez district, Los Angeles County: Bankline Oil Co. 1 Videgain, 17-4n-17w, location graded, elev. 1,750 ft.
Towsley Canyon, Los Angeles County: Barnsdall and Bandini 1 Limebacher, 17-3n-16w, building road to location.

Raisin City Test Encounters Sand Trouble

Shell Oil Co., Inc., is meeting with a further delay with its second well in the Raisin City field of Fresno County and it may be another 2 weeks before another production test is made. This well is bothered with a fine running sand that results in the well sanding up within a short time after being swabbed. On the first production test the company was obliged to resume drilling within a few hours after the start of the test when the well sanded up. It was decided at that time to change the size of the perforations and so another liner with smaller mesh was used but this too failed to keep out the sand. The company has

AVERAGE DAILY PRODUCTION

	July 12	July 3
Wilmington	84,350	81,150
Midway-Sunset	49,875	40,775
Coalinga	40,550	32,500
Long Beach	37,995	40,550
Kettleman North Dome	37,995	40,550
Ventura Avenue	35,250	34,550
Huntington Beach	29,350	29,950
Dominguez	28,025	26,050
Santa Fe Springs	23,350	23,175
Santa Maria Valley	18,625	16,550

now decided to use a wire-wrapped perforated liner and may possibly gravel pack around this pipe. In the meantime, the company's discovery well located north of the present well will remain shut in. It is not likely that any further drilling will be done until the status of the present well has been determined. Possibly productive acreage in this newly discovered field is all held in relatively large blocks and for this reason it is logical to assume that future development will be along conservative lines. The discovery well failed to show much crude oil but the second well flowed several times at the rate of 1,500 bbl. of 31.6-gravity oil daily before sanding up.

North Belridge Deep Test Below Wagonwheel Zone

The deep test of Belridge Oil Co. in the North Belridge field of Kern County has reached a depth of 9,200 ft. and this well, 55-26 fee in 26-27s-20e, is now 1,200 ft. below the top of the Wagonwheel zone of Eocene age and about 800 ft. below the bottom of the same zone. The company is spot coring but has not yet found anything of importance since passing the base of the Wagonwheel zone. This well is an important one because it should determine the future importance of the North Belridge field from a production standpoint. This field showed up exceptionally well in the period following discovery but recent developments indicate that it was greatly over estimated. The Temblor is in a very depleted condition and recovery from the Wagonwheel zone will not be as high as originally expected due to gas expansion and the exceptionally high gas-oil ratio of wells. Belridge Oil Co. and other operators are doing considerable research and making a detailed study in order to determine the most advantageous method of production. It is quite evident that the field will never produce its maximum unless some method is devised to retain pressures and conserve gas.

Buena Vista Hills Deep Well To Test Higher Sands

Honolulu Oil Corp. did not make much progress in its deep test on the Buena Vista anticline in the Midway-Sunset field of Kern County during the week but a series of tests will be made during the forthcoming week. Drill pipe has been recovered to 12,880 ft. and the bottom part of the hole down to 14,622 ft. has been abandoned. The projected tests will involve the interval at 8,500-10,000 ft. which is below the Stevens zone but above the Vedder zone. The latter apparently was not reached before drilling operations were concluded. The outcome of drilling on this well has been a disappointment not only to Honolulu

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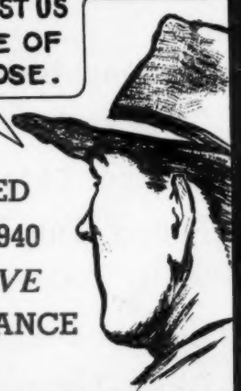

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but to all operators interested in the Buena Vista Hills section of the Midway-Sunset field. It had been expected that the Stevens and the Vedder zones would be found highly productive in Honolulu's 25-P in 10-32s-24e. The Buena Vista Hills anticline was considered one of the most favorable structures in the San Joaquin Valley and appeared almost certain to contain deeper productive zones.

Miscellaneous

Deep Tests

In the Buttonwillow district of Kern County, Texas Co. is making a production test in its 47-15 Southern Pacific in 15-29s-24e, with bottom of the hole at 12,138 ft. The interval being tested is the equivalent of the Stevens zone of Miocene age. The Bellevue district of Kern County south of the Greeley field where Union Oil Co. abandoned 31-3 Kernco in 3-30s-26e, is to receive further exploring although projected new work will be located north of Union's abandoned wildcat. This will involve deep drilling if the proposed wildcat is carried down to the Vedder as this should not be found much above 11,000 ft. The Stevens zone failed to prove very productive in the Greeley field but the Vedder and Rio Bravo zones have shown characteristic productivity. Ohio Oil Co. is rotating below the Stevens in its Bellevue wildcat located east of Union's wildcat that was abandoned this week. The Stevens contained gray sand in this wildcat and was not even tested. Continental Oil Co. is making good progress in 2-C Kern County Land in the Shafter district of Kern County and is now redrilling at 9,840 ft. The lower part of the hole was lost as a result of mechanical difficulties.

SAN JOAQUIN VALLEY COMPLETIONS

Bellevue wildcat district, Kern County: Union 31-3 Kernco, 3-30s-26e, abandoned, T.D. 12,396 ft., 13⅜-in. surface pipe 1,504 ft., top Stevens 7,370 ft., Vedder 12,300 ft., Stevens barren, slight showing in upper part of Vedder zone of Miocene age, stopped in gray Vedder sand.

Coalinga Northeast, Fresno County: Bandini Pet. Co. 41-30-B, 30-19s-16e, flowed 175 bbl., 27.7-gravity, 3 per cent cut, 300,000 cu. ft. gas, 22/64-in. bean pressures 100/600 lb., T.D. 8,293 ft., P.B. 8,285 ft., 100-mesh perf. 8,277-83 ft., shot 8 holes 8,279-81 ft., recompleted after P.B. to 8,283 ft., Kreyenhagen 6,535 ft., glauconitic 7,840 ft., green sand 7,856 ft., recompleted in Gatchell oil sand 8,276-83 ft.

Coalinga Southeast, Fresno County: Superior 1 Hight, 8-20s-16e, flowed 1,483 bbl., 27.4-gravity, 0.2 per cent cut, 750,000 cu. ft. gas, 32/64-in. bean, pressures 825/1,050 lb., T.D. 8,099 ft., perf. 7,965-8,099 ft., top 78 ft. 125-mesh, lower 56 ft. 225-mesh, recompleted in Gatchell oil sand after deepening from 7,999 to 8,099 ft.

Midway-Sunset, Kern County: Texas 9 Thornber, 10-32s-24e, pumped 10 bbl., 27.2-gravity, 0.5 per cent cut, T.D. 4,657 ft., perf. 4,530-4,656 ft., completed in the C zone of Pliocene age.

Mount Poso, Kern County: Shell 28 Security, 16-27s-28e, pumped 548 bbl., 15.6-gravity, 3.5 per cent cut, T.D. 2,071 ft., perf. 1,996-2,071 ft., completed in Vedder zone of Miocene age.

Shell 17 Vedder-Rail, 9-27s-28e, pumped 274 bbl., 16.5-gravity, 30.5 per cent cut, T.D. 2,022 ft., perf. 1,982-2,022 ft., completed in Vedder zone of Miocene age.

Tejon wildcat district, Kern County: Reserve O. & G. Co. 33-2 Reserve, 33-11s-19e, abandoned, T.D. 6,000 ft., showed small amount of oil and gas.

Ten Section, Kern County: Shell 46-29-A Kern County Land, 29-30s-26e, flowed 550 bbl., 32.7-gravity, 1.5 per cent cut, 564,000 cu. ft. gas, 16/64-in. bean, pressures 250/500 lb., T.D. 8,231 ft., perf. 7,966-8,231 ft., completed in Stevens zone of Miocene age.

SAN JOAQUIN VALLEY OUTPOSTS

Belridge, Kern County: Sentinel Oil Co. 1 Belridge 10-28s-20e, drilling 3,682 ft. in sand and blue shale, elev. 731 ft.

Belridge Oil Co. 55-26 fee, 26-27s-20e, drilling 9,225 ft. in sand and shale, this deep test is at present about 1,100 ft. below top of productive Wagonwheel zone of Eocene age, elev. 658 ft.

Buena Vista Hills, Kern County: Honolulu 25-P fee, 10-32s-24e, T.D. 14,622 ft., drill pipe stuck, spotted oil, recovered to 12,880 ft., elev. 916 ft.

Elk Hills, Kern County: Standard 42-31-S fee, 31-30s-24e, T.D. 8,021 ft. in shale, fishing drill pipe, elev. 1,122 ft.

Standard 45-19-S fee, 19-30s-24e, drilling 8,864 ft. in sand, elev. 707 ft.

Standard 7-33-S fee, 33-30s-24e, drilling in sand and shale 2,775 ft., elev. 59 ft.

Kettleman North Dome, Kings County: Standard 1-1-U fee, 1-23s-16e, drilling 12,508 ft. in hard gray sand, elev. 693 ft.

Midway-Sunset, Kern County: North Amer. Oil Cons'd. 1-28 W.P., 28-32s-23e, T.D. 7,824 ft. in very hard shale with streaks of tight impervious sand, checking log, elev. 1,560 ft.

SAN JOAQUIN VALLEY WILDCATS

Burrell district, Fresno County: General Pet. 1 Burrell, 2-17s-18e, drilling 5,630 ft. in siltstone and gray sand, elev. 210 ft.

Buttonwillow district, Kern County: Texas 47-15 Southern Pacific, 15-29s-24e, T.D. 12,138 ft., testing hard tight Stevens oil sand and shale, elev. 297 ft.

Superior 13 Kern County Land, 18-29s-25e, drilling and spot coring in sand and shale 11,276 ft., elev. 313 ft.

Bellevue district, Kern County: Ohio 1-G Kern County Land, 36-29s-26e, drilling 9,380 ft. in sand and shale below Stevens zone, elev. 373 ft.

Delano, Kern County: Associated 46 Quinn, 8-25s-27e joint test with Union Oil Co., graded location.

Dyer Creek district, Kern County: Shell 46-11 Smith, 11-28s-27e, T.D. 2,443 ft. in gray sand and shale, Vedder zone 2,375 ft., elev. 884 ft.

Lost Hills district, Kern County: Associated 46-16 fee, 16-27s-21e, drilling in sandy shale 5,587 ft., elev. 424 ft.

Monocline Ridge district, Fresno County: Seaboard Oil Co. 2 Hagood, 6-17s-13e, rigging up and preparing to spud.

Pyramid Hills district, Kings County: Pyramid Prod. Co. 2 Spreckles, 16-24s-18e, drilling in sand 673 ft., elev. 673 ft.

Raisin City district, Fresno County: Shell 1-19 Santa Ana and Fresno Land, T.D. 5,049 ft., cemented 7-in. casing 5,022 ft., making production test.

Rio Vista district, Solano County: Amerada Pet. Corp. 1 Upham, 18-3n-3e, drilling 4,305 ft. in gas sand, cemented 5½-in. water string 4,305 ft., elev. 10 ft.

Jergins Oil Co. 1 Twitchell, 6-3n-3e, location staked 330 ft. S, 1,200 ft. E from NW cor. of section, landed 60 ft. of 16-in. surface pipe, elev. 15 ft.

Standard 1 Suisun Comm., rig erected, scheduled for immediate work.

Superior 1 Larson, 8-3n-3e, location staked 330 ft. N, 1,023 ft. E from NW cor. of section.

Superior 1 McCormack, 9-3n-3e, location staked 3,630 ft. N, 330 ft. E from SW cor. of section.

Sharkey Landing district, Glenn County: Holly Sugar Co. 1 fee, 32-22n-1w, drilling 3,897 ft. in sand and shale, elev. 32 ft.

Shafter district, Kern County: Continental 2-G Kern County Land, 35-27s-24e, T.D. 11,349 ft., redrilling 9,784 ft.

Tejon district, Kern County: Richfield 2-A Tejon, 19-11n-18e, drilling and coring in sand 4,398 ft.

Athens Test May Be Started Up After Blowout

R. S. Lytle will make an attempt to determine the status of 1 Anderson in the Athens district of Los Angeles County which blew out early last week flowing about 50,000,000 cu. ft. of gas and a considerable quantity of water, mud, and sand. The derrick withstood the shock and battering in good shape and it is therefore possible that Lytle may be back in the hole again within the next week. It is interesting to note in connection with this blowout which apparently came from an interval around 1,500-1,700 ft. that the gas was almost pure methane. A test showed that

HE CHECKED HIS WATCH TO MAKE SURE IT HADN'T STOPPED . . . .

A Competitor Reported—"Franks Servicing Unit Backed Into Position, Pulled Tubing, Flushed Well, Ran Tubing Back, Lowered Derrick and Drove Away — *in 29 Minutes*"

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the gas from this well was the closest to pure methane ever tested in California. For many years California operators and a number of operators in the East have used Buttonwillow gas as a methane test due to its high methane content. The Athens gas was far superior to Buttonwillow as far as methane is concerned. Very little attention is being paid to the well being drilled in the Athens district by Rankin & Williams but these operators are going ahead in good shape and have reached a depth of 9,389 ft. They are at present coring for a zone of sufficient thickness to justify the expectation of finding substantial production. Only minor showings have been logged to date.

Inglewood North Test Shows Small Recovery

Conditions in the Inglewood field did not look any too promising this week as far as the northwest end of the structure is concerned because of the disappointing showing of 2 Smith of Federal Oil Co. This well, bottomed at 8,175 ft. and finished with 351 ft. of 4¼-in. liner including 260 ft. of perforated, did not have sufficient gas to result in a natural flow. The company injected gas from 1 Smith but even then refused to show any production. After acidizing again and injecting gas for the second time the well began flowing by heads at the rate of about 100 bbl. of 32.9-gravity oil daily. Further work will be done on the well as the oil sand must be mudded off or cemented off in some manner. There does not appear any reason why this well will not flow inasmuch as it is too near a good flowing well to show such a difference. Tide Water Associated Oil Co. will be the second major company to begin developing the Miocene in the Inglewood field as derrick is going up for 70 Vickers. Texas Co. was the first major company to enter deep-zone development and has already completed its first well.

Rapid Pressure Declines May Slow Dominguez Drilling

Two potential producers are scheduled to be completed in the west end of the Dominguez field within the next week but after that there will be a delay of several weeks before it will be definitely determined whether any considerable number of wells will be drilled. Pressures are dropping so rapidly in the townlot area adjoining Union's Austin lease in the west end of Dominguez that Union is seriously considering stopping further offset drilling. Union has met well for well along the west line of its Austin lease and consequently would also be affected if pressures dropped to the point where the pumping stage would be reached ahead of time. It is becoming quite evident that the relatively thin amount of oil sand present in the extreme west end of Dominguez will not systain intensive drilling indefinitely.

Wilmington Becoming More Active

Drilling operations are again showing an increasing tendency in the Wilmington field especially around the northern edge and in the townlot section. In the center of the field Union Pacific Railroad Co., largest holder of productive acreage in the field, is drilling 5 wells and has locations staked or derricks standing for 11 others. Recent completions have been made in the Ford zone adjoining the townlot section but no move has been made to proceed with deep-zone exploitation of this zone in the central and eastern end of the field. There has been a general reconditioning program under way in the field during the past several months to maintain production by gravel packing.

LOS ANGELES BASIN COMPLETIONS

Dominguez, Los Angeles County: Northwest Dom. Associates 2 Grant, 29-3s-13w, flowed 610 bbl., 31.5-gravity, 0.8 per cent cut, 750,000 cu. ft. gas, 48/64-in. bean, pressures 300/500 lb., T.D. 7,258 ft., P.B. 7,236 ft., perf. 7,206-36 ft., completed in seventh Callender zone of Miocene age.

Shell 117 Reyes, 34-3s-13w, flowed 353 bbl., 29.1-gravity, 1.8 per cent cut, 1,643,000 cu. ft. gas, 128/64-in. bean, pressures 50/250 lb., T.D. 4,195 ft., perf. 3,850-4,195 ft., completed in first Callender zone of Pliocene age.

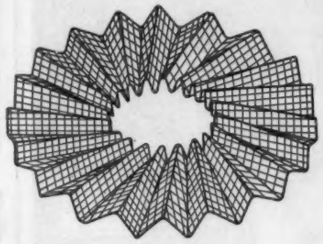
Huntington Beach, Orange County: Standard 35-A Huntington, 34-5s-11w, flowed 216 bbl., 15.9-gravity, 25 per cent cut, 38/64-in. bean, pressures 75/600 lb., T.D. 4,850 ft., perf. 3,035-4,848 ft., completed in Middle zone of Pliocene age.

Long Beach, Los Angeles County: Dumm Bros. 1 Bixby, 28-4s-12w, pumped 110 bbl., 21.6-gravity, 5 per cent cut, T.D. 5,052 ft., perf. 4,482-85 ft., 4,520-42 ft., 4,635-60 ft., 4,667-72 ft., 4,678-87 ft., 4,690-96 ft., 4,905-80 ft., also 2 shots at 4,473, completed in Brown zone of Pliocene age.

Wilmington, Los Angeles County: Mormon Oil Co. 1 Pearl, 32-4s-13w, pumped 80 bbl., 14.9-gravity, 10

(Continued on Page 84)

DEFENSE AGAINST DUST *with* DONALDSON *Oil-Washed* AIR CLEANERS



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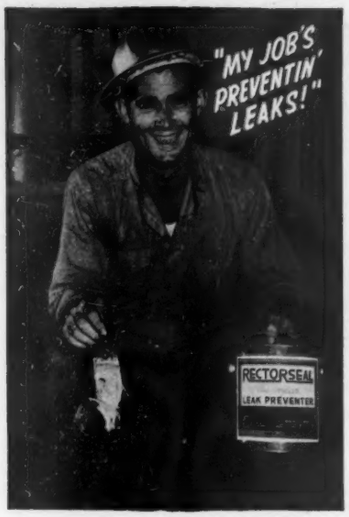

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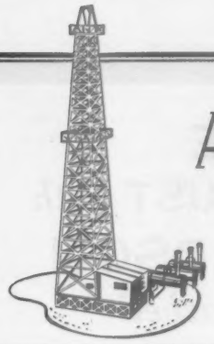

Among the Drilling

Contractors Submit Agreement To Wage-Hour Administration

TOOLPUSHERS and drillers in charge are exempt from the provisions of the wage-and-hour law according to an agreement submitted by the American Association of Oil-Well Drilling Contractors on behalf of 175 drilling organizations operating 900 drilling rigs. The agreement was drawn up following a meeting last month of representatives of the drilling contractors with Gen. Philip B. Fleming, administrator of the wage-and-hour division, and needs only the acknowledgment of General Fleming to put it into effect.

It includes an interpretation of the provisions of the law and what the drilling industry must do to comply. Agreement to follow out this interpretation will result in the wage-and-hour administration dropping investigations of contractors for violations prior to July 15, 1941, when the agreement goes into effect. Failure to keep the agreement on the part of contractor after that time will result in forcing compliance of the act since its effective date. Employe suits are not barred under the agreement and pending suits brought by the wage-and-hour administration will not be dropped.

The agreement allows the contractor to reclassify employes now on a wage or salary basis and put them on an hourly basis providing the rates are established in good faith, strictly adhered to and the employes compensated at time and one-half for overtime. The 6-2 plan under which the work day is divided into a number of straight-time hours and a number of overtime hours is prohibited.

Drilling crews presenting themselves for work and working only part of a tour may be considered as having completed the tour. Agreements may be made with watchmen and water pumpers, who live on or near the scene of operation but who work only a portion of the time, setting forth the normal number of hours per week required for the performance of their duties; all time over this amount must be paid at the rate of time and a half. Such employes must make a report of any such overtime within 4 weeks except in cases where they have been coerced into falsely reporting the number of hours worked. Drilling crews which must go by boat to and from the job are to be paid traveling time.

Truck drivers hauling material across state lines are exempt from the wage-and-hour law for that week but come under the jurisdiction of the Interstate Commerce Commission. When truck drivers and helpers are hauling material from the supply stores to the location, hauling from the warehouse to the location or working around the location or rig, they come under the wage-and-hour law and must be paid accordingly.

Purpose of the agreement is to simplify enforcement of the law while at the same time eliminating a number of possible troublesome suits for violations during the time when there was little knowledge of the working of the law and no rulings from the wage-and-hour administrator as to how drilling contractors were to comply with it.

HARVEY Drilling Co., Wichita Falls, Tex., has opened another Strawn sand field for northeastern Cooke County, Texas, in its 1 Ware, 2½ miles northeast of the Anderson & Kerr pool and in the W. W. Crisp Survey. Sand was logged from 2,223-2,330 ft. On pumping test the well produced 82 bbl. of oil in 8 hours.

MAC ACKERMAN, who recently resigned from Lupher Drilling Co., Mount Pleasant, Mich., has joined Weber Oil Co., Bay City, Mich., as superintendent of drilling operations.

BARNETT Drilling Co., Wichita, Kans., has been formed by A. B. Barnett who was formerly with the Harbar Drilling Co. and Cetal Drilling Co.

BENNETT & HOLDER of Abilene, Tex., have contracted with Harry Karotkin, of San Antonio, and John Castor, of Ballinger, Tex., to deepen the former Hightower Oil & Refining Corp. 1-A D. A. Brevard in the McMillan pool in Runnels County, Texas. From the old total depth of 2,524 ft. the test will be drilled to 3,600 ft. unless Palo Pinto production is developed shallower.

OSAGE Drilling Co. is rigging up for Anderson-Prichard 1 Brownfield. The wildcat is 3½ miles southeast of Brownfield in south central Terry County, Texas. Contract depth has not been announced.

SAM HENDERSON, of Baird, Tex., is moving in rig for a scheduled 1,300-ft. wildcat test 8 miles southwest of Baird in Callahan County, Texas. The well, 1 Ella Moore Seale, will be 508 varas from the west and 237½ varas from the south lines of the south 192½ acres in J. H. Brown Survey 254.

BUTLER & HORNE Drilling Co., Abilene, Tex., has completed 1 C. C. Lenderman for a new pool discovery well in Jones County, Texas, between the Lewis-Steffens and Sandy Ridge fields.

HELMERICH & PAYNE, Inc., Tulsa drilling and operating firm, has a well nearing completion 15 miles southeast of Norton, Kans.,

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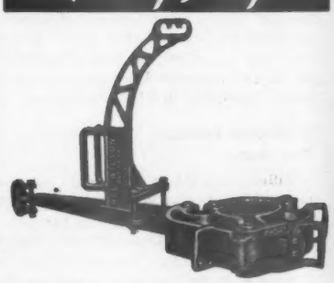

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Contractors

showing for a new discovery. The well is in 11-4s-21w, Norton County, Kansas. Casing is set at 3,401 ft. and the showing of producton is from the Lansing-Kansas City lime series topped at 3,402 ft. First oil show came from 3,407 ft. On one swabbing test it made 60 bbl. in 19 hours.

McDANNALD Drilling Co., Houston, Tex., has started drilling operations on the company's projected deep wildcat north of the Dyersdale field, Harris County, Texas Gulf Coast, while in Jefferson County, Texas, the company's 1 Hebert & Trust is drilling in shale below 9,900 ft.

DAVID DONOHO, Corsicana, Tex., contractor, will soon start a 1,000-ft. wildcat in southeast Rockwall County, Texas. The test will be drilled for W. R. Pankey and J. W. Bibb, both of Dallas, and is 1 Dloyd Hartman, 630 ft. from the west and 600 ft. from the south lines of the W. Crabtree Survey. Location is on a 2,500-acre block, 5 miles southwest of the Rockwall townsite.

MORRIS-HAMILTON Drilling Co., Houston, Tex., has completed a third Cockfield sand producer in the Garwood field, Colorado County, Texas, for W. R. Davis Co. Another rig is being moved to the field, making a total of three rotaries which are engaged in developing this structure. In the Rincon field, Starr County, Texas, one rig is running for the same company.

C. T. McLAUGHLIN, drilling contractor of Midland, Tex., at the week end was digging pits for a 7,250-ft. wildcat to be drilled in Fisher County, West Texas, for Shell Oil Co., Inc. The test will be the 1 J. H. Vaughn, 18 miles north of Sweetwater, in Section 205, Block 3, H.& T.C. Survey. The wildcat is on a long-held 12,000-acre block which Shell has worked with both core drill and seismograph in recent years.

HELMERICH & PAYNE, Inc., Tulsa, has been awarded contract by Pure Oil Co. for drilling a test 22 miles west of Fort Stockton in Pecos County, West Texas. Contracted to 6,000 ft., the test will be Pure 1 TXL (George C. Fraser et al) in Section 43, Block 49, Township 10, T.&P. Survey. The test is located on a 16,500-acre block held by Pure and is 7 miles northeast of a 5,000-ft. dry hole drilled by Pure several years ago.

HARRY L. EDWARDS Drilling Co., Houston, Tex., has spudded a Wilcox test located in the Willis area, Montgomery County, Texas Gulf Coast, for Continental Oil Co. Drilling continues in the Moss Lake area, Calcasieu Parish, Louisiana, for Pan American 1 Calcasieu National Bank following a drill-stem test at 9,100 ft. which recovered salt water and a small amount of oil. On the east flank of the Pine Prairie dome, Evangeline Parish, Louisiana, Pan American 1 Guillory has been spudded. Three other operations are reported at Dickinson and Gillock fields, Galveston County, Texas, for Pan American and Coast Petroleum Co., and at the Old Ocean field, Brazoria County, Texas, for Harrison & Abercrombie.

F. L. DOUGHERTY Drilling Co., Dunkirk, N. Y., has started a test near Arkwright, N. Y., for Iroquois Gas Co. of Buffalo, N. Y. The Dougherty company drilled several wells last year for the Republic Light, Heat & Power Co., a Cities Service Co. subsidiary.

CROW Drilling Co., Houston, Tex., is nearing the 6,500-ft. mark in its Panola County, Texas, wildcat operation southeast of Carthage. The test entered Travis Peak at 6,108 ft.

PARKER Drilling Co., Midland, Tex., has completed 1 G. L. Pace on the west side of the Jordan area in southern Ector County, Texas, for initial production of 858 bbl. daily after a shot with 1,100 qt. at total depth of 3,695 ft.

SAWYER Drilling Co., Houston, Tex., has cemented casing for a production test in Sinclair Prairie 1 H. R. Carlson, a wildcat located in the El Campo area, Wharton County, Texas Gulf Coast. Total depth of the hole is 8,020 ft., and 5½-in. casing was cemented at 7,672 ft. to test sand at 7,542-52 ft. which was logged by an electrical log.

RED IRON Drilling Co., of Marshall, Tex., received contract from Bobby Manziel, Tyler, Tex., operator, and Jack Dempsey, former heavyweight champion of the world, to drill 1 Barney Holmes. The test is on a 20-acre tract, in the Rusk Survey, 1¾ miles southeast of Crow, in Wood County, Texas.

PARKER Drilling Co., Houston, Tex., is preparing to start drilling operations on two interesting contracts in the Louisiana Gulf Coast district. On the southeast flank of the Edgerly field, Calcasieu Parish, 2 Miller, a 10,000-ft. test, is being started for Gulf Refining Co., while at the Avery Island salt dome, Iberia Parish, Louisiana, preparations are being made to drill another deep test on the flank of this old dome for Gulf Refining Co. The company recently drilled a 12,000-ft. test on the structure in an attempt to open the first production.

GLENN McCARTHY, Houston, Tex., is moving a rotary to the Magnolia area of Montgomery County, Texas Gulf Coast, for his 11 Seyle, a projected 9,500-ft. Wilcox test located in the John Scott Survey. Drilling continues with six rotaries located at the League City, Keeran, Chocolate Bayou, Old Ocean, and Bailey's Prairie area in Galveston, Victoria, and Brazoria counties, Texas, for Phillips Petroleum Co., Barnsdall Oil Co., Harrison & Abercrombie, F. J. Anderson, and Glenn H. McCarthy, Inc.

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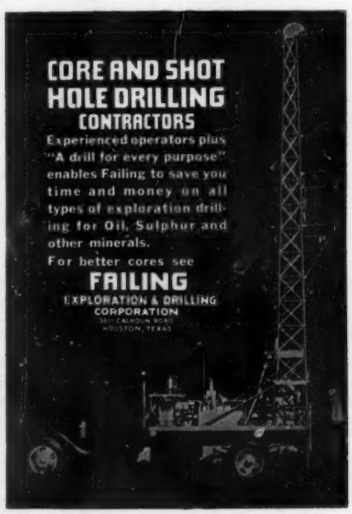
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Wildcat to Test Area Between Sand Hills and Extension

By R. MARNE SANFORD

MIDLAND, Tex., July 14.—An attempt to link Ordovician pay on the south side of the Sand Hills field proper, in Crane County, with the Sand Hills South Extension field over 4 miles southwest was finally launched this week by Gulf Oil Corp. The test will be drilled as 1-B Tubb, 660 ft. out of the southwest corner of Section 28, Block 27, P.S.L. Survey. This places the test about 1½ miles north of Gulf 17 Waddell, which was the Extension field discovery.

In the Sand Hills pool proper, American Liberty Oil Co. has completed the largest Ordovician producer ever registered in the field. The well, 12 Tubb, is on the north side of the deep area in the southern part of the Tubb sector, Section 11, Block 27, P.S.L. Survey. After treatment with 5,000 gal. of acid at 5,761 ft., the well kicked off to flow at the rate of 10,327 bbl. of oil daily on 6-hour Railroad Commission gage. No. 12 Tubb is a north offset to the firm's 3-A Tubb, completed for 9,457 bbl. daily, previously recognized as the largest producer in the area.

A new wildcat for Crane County has been announced by Gulf Oil Corp. The firm will test on its Waddell holdings in the northeastern part of the county. The wildcat will be 45 Waddell, 1,650 ft. out of the southwest corner of Section 6, Block 24, P.S.L. Survey. It is located ¾ mile southwest of the Ella Waddell pool and 1¼ mile northwest of the Dune area. Contract depth is 3,500 ft.

Two Wildcats for Pecos County

Stanolind Oil & Gas Co. has staked a wildcat test 1 mile east of the northern end of production in the Abell pool of northern Pecos County. Stanolind 1 Rathjen is located in the center of Lot 14, Section 26, Block 9, H.&G.N. Survey, and will probably seek production from either the Simpson or Ellenburger sections of the Ordovician.

In west central Pecos County, Pure Oil Co. will test the Delaware sand on a 16,500-acre block 22 miles west of Fort Stockton. This test was reported scheduled several months ago but it was not until this week that definite plans were announced. The wildcat is the firm's 1 George C. Frazer, located in the southwest part of Section 43, Block 49, Township 10, T.&P. Survey, and is contracted to 6,000 ft.

Three Wildcats Started In Crockett County

Application for permits to drill three wildcats in western Crockett County were filed with the Railroad Commission during the week. Forest Development Corp. asked permission to drill a test on the J. M. and Margaret Shannon estate about 1½ miles north-northeast of a dry hole drilled on the same ranch a year ago. Forest 1 Shannon will be 467 ft. out of the southwest corner of Lot 20, League 2, Archer County School Land Survey, about 9 miles east of Iraan.

J. Silas Pittman plans to start operations northwest of the Noelke field at 1 O. W. Parker, staked 467 ft. out of the southwest corner of Section 28, Block HH, G.C.&S.F. Survey. The test is on a 640-acre lease 5 miles northeast of Iraan.

Pittman also will drill 1 Bouscaren estate in the northwestern corner of Section 29, Block HH, G.C.&S.F. Survey. The test is on a 320-acre lease and will be drilled to 2,500 ft. unless production is obtained at a shallower depth.

SUMMARY OF COMPLETIONS

Southern West Texas

	No.	Bbl.	Footage
Oil: Goldsmith	2	2,025	8,534
Johnson	3	9,780	12,660
Keystone	3	13,688	10,056
McElroy	2	358	5,408
North Cowden	4	7,370	17,035
Sand Hills	2	4,645	10,294
Other fields	4	442	14,339
Dry: Fields	3	.....	5,353
Total	23	.....	83,679

Northern West Texas

	No.	Bbl.	Footage
Oil: Cedar Lake	2	1,239	9,612
Slaughter	14	14,483	70,277
Snyder	2	381	5,680
Wasson	7	2,975	36,614
Other fields	1	220	2,445
Dry: Fields	1	.....	3,248
Wildcats	2	.....	10,403
Total	29	.....	138,279

Panhandle

	No.	Bbl.	Footage
Oil wells	9	1,484	27,717
Dry holes	1	.....	4,028
Total	10	.....	31,745

Southeast New Mexico

	No.	Bbl.	Footage
Oil wells	7	923	32,055
Dry holes	1	.....	3,992
Total	8	.....	36,047

SOUTHERN WEST TEXAS COMPLETIONS

(24-hr. ratings based on last 3 hr. of 6-hr. gages)

Fields

Abell, Pecos County: Magnolia-Stanolind 2 Tex-Mex McKee, 238 bbl., ⅝-in. choke, 5,239-92 ft., P.B. from 6,118 ft.

Church-Field, Crane County: Atlantic 1-17-B University, pumped 38 bbl. oil and 18 bbl. water, 620-qt. shot, 3,135-3,300 ft.

Goldsmith, Ector County: Cities Service 8-B Cummins, 927 bbl., 243-qt. shot, 4,190-4,275 ft.

Gulf Oil 360 Goldsmith, 1,098 bbl., 4,000 gal. acid, 4,194-4,259 ft.

M. D. O'Quinn 7 T.&P. Lands Tr., dry at 1,435 ft.

Johnson, Ector County: Arrow Drilling 2 Johnson, 244 bbl., pumping, plus 2 per cent water, 275-qt. shot, 4,060-4,208 ft.

I.T.I.O. 1-C Johnson, 67 bbl., ¾-in. choke, 167-qt. shot, 4,098-4,162 ft.

Sunray Oil 3-J Johnson, 935 bbl., ¾-in. choke, 545-qt. shot, 4,050-4,290 ft.

Keystone, Winkler County: Ralph Lowe 2 Zackery, 547 bbl., 560-qt. shot, 3,090-3,289 ft.

J. R. Sharp 5 Jenkins-Gulf, 298 bbl., ¾-in. choke, 270-qt. shot, 3,270-3,367 ft.

Sam Weiner 8 Jenkins, 183 bbl., ¾-in. choke, 400-qt. shot, 3,295-3,400 ft.

McElroy, Upton County: Gulf Oil 248 McElroy, 306 bbl., 800-qt. shot, 2,915-3,102 ft.

J. S. Pittman 1 Hobbs (old well drilled deeper) pumped 52 bbl., old T.D. 2,295 ft., new T.D. 2,306 ft.

Noelke, Crockett County: Bolsa Chico 1 Noelke, dry at 1,638 ft.

North Cowden, Ector County: American-Maracaibo 5-B Scharbauer, 670 bbl., 27/64-in. choke, 4,000 gal. acid, 4,125-80 ft.

Atlantic Refg. 2-B Wight, 63 bbl. oil and 11 bbl. water, 445-qt. shot, 4,135-4,210 ft.

Barnsdall Oil 22 Smith, 795 bbl., ¾-in. choke, 280-qt. shot, 4,175-4,317 ft.

Carl B. King 5-B Holt, 434 bbl. 320-qt. shot, 4,295-4.328 ft.

O'Brien, Winkler County: Gulf Oil 171 O'Brien, 80 bbl., 320-qt. shot, 2,626-2,771 t.

Pecos Valley, Pecos County: M. H. Black 2 Pecos Valley (old well drilled deeper), old T.D. 1,515 ft., dry at 2,280 ft.

Sand Hills, Crane County: Gulf Oil 4-A Tubb, 2,501 bbl., 3,000 gal. acid, 5,724-56 ft.

Humble 56 Tubb, 2,144 bbl., 2½-in. casing outlet, 3,000 gal. acid, 4,366-4,538 ft.

White & Baker, Pecos County: Cardinal Oil 1-J White & Baker, 86 bbl., 110-qt. shot, 2,042-2,150 ft.

SOUTHERN WEST TEXAS ACTIVE WILDCATS

Brewster County: Chester Dewey 1 Decies, 600 ft. from N and 1,980 ft. from S lines, Sec. 45, Blk. 4, G.C.& S.F. Sur., 3,000-ft. test, 10-in. at 40 ft.

Crockett County: Bolsa Chico Oil 1 Bouscaren, 624 ft. from S and 330 ft. from E lines Sec. 57, Blk. GG, T.C.R.R. Sur., gas show at 1,162 ft., drilling plugs from 7-in. casing at 1,159 ft.

Bolsa Chico Oil 1 Noelke, 467 ft. from N and E lines, Sec. 22, Blk. GG, G.C.&S.F. Sur., show oil 1,275-80 ft., prep. to abandon at 1,638 ft.

R. H. Henderson 1 Couch, 467 ft. from N and 2,173 ft. from E lines Sec. 37, Blk. GG, H.E.&W.T. Sur., S.D. 902 ft.

Forest Development 1 Shannon, 467 ft. from W and S lines Lot 20, Lge. 2, Archer Co. Sch. Lds. Sur., 2,600-ft. test, first report.

J. S. Pittman 1 O. W. Parker, 467 ft. from S and W lines Sec. 28, Blk. HH, G.C.&S.F. Sur., first report.

Crane County: Continental 1 E. B. Jones, 660 ft. from NE and NW lines Sec. 12, Blk. 3, H.&T.C. Sur., Ordovician test, rigging up.

Gulf Oil 1-B Tubb, 660 ft. from W and S lines Sec. 28, Blk. B-27, P.S.L. Sur., derrick, first report.

Loving County: Pinal Dome Oil 1 Michigan Oil fee, NW SW Sec. 15, Blk. 26-C, P.S.L. Sur., 5,300-ft. test, fishing at 4,872 ft.

Pecos County: Pure Oil 1 T.&P Lands Tr., 660 ft. from W and 1,980 ft. from S lines, T.&P. Sur., 6,500-ft. test, first report.

Redmond, Greene & Davis 1 Iowa Trust, E½ W½ Sec. 29, Blk. 10, H.&G.N. Sur., Ordovician test, drilling 5,172 ft.

Anderson-Prichard 1 Boren, 1,979 ft. from S and 660 ft. from E lines Sec. 4, L. Merchant Sur., drilling below 3,125 ft.

Cremin & Boren 1 Bowen, 2,310 ft. from NW and 1,650 ft. from NE lines Sec. 60, Blk. 10, H.&G.N. Sur., 2,100-ft. test, drilling 150 ft.

Phillips 2 Nutt, new location 2,310 ft. from N and W lines Sec. 125, T.&St.L. Sur.

A. Hargrove 1 Univ.-Continental, NE cor. Sec. 4, Blk. 7, University Sur., drilling 920 ft.

Reagan County: Amerada 1-RA University, Sec. 3, Blk. 48, University Lands Sur., drilling below 8,405 ft.

Terrell County: Texas Consolidated 1 Holmes, NE NE Sec. 14, Blk. 2-A, G.H.&S.A. Sur., 3,600-ft. test, T.D. 1,900 ft., last report.

Upton County: Plymouth Oil 1 Alford, C Sec. 50, Blk. 12, P.B. Scott Sur., Ordovician test, drilling 4,-895 ft.

Mesquite Oil 1 Cross, Sec. 34, C.&M. Sur., running 8⅝-in. casing to 1,500 ft., T.D. 3,710 ft.

Ward County: J. E. Fitzpatrick 1 Pruitt, 467 ft. out of S cor. Sec. 21, Blk. 1, W.&N.W. Sur., T.D. 1,145 ft., last report.

Shell 1 Sealy-Smith, 2,310 ft. from S and 330 ft. from E lines Sec. 28, Blk. 3, G.M.M.B&A. Sur., Ordovician test, set 16½-in. casing at 90 ft., moving in rotary.

Winkler County: Magnolia 20 States-Walton, NW cor. Sec. 4, Blk. 3-B, P.S.L. Sur., drilling below 6,530 ft.

Sam Weiner 2 Halley, NW NE Sec. 7, Blk. 11-B, P.S.L. Sur., fishing 3,023 ft.

Wildcatting in Northern Sector

Attention this week in the north part of the Permian basin was centered on five drilling wildcats scattered over five counties and two new wildcats staked in Mitchell and Terry counties.

The deepest project is the Shell Oil Co., Inc., 1 Sealy-Smith, 2,310 ft. from the south and 330 ft. from the east lines of Section 38, Block A, G.&M.M.B.&A. Survey, a scheduled 11,000-ft. Ordovician test in the extreme northeastern part of Ward County. Operator has set 16½-in. surface pipe at 90 ft. Total depth is 107 ft., where operator is waiting on rotary.

L. C. Harrison reports a show of oil at 1,420 ft. at 1 Nairn estate, Section 25, Block A, John H. Gibson Survey. The test is 3½ miles northeast of the city of Lubbock in Lubbock County and at last reports was drilling below 2,900 ft.

In Terry County, plug was being drilled on the 8⅝-in. surface casing set at 205 ft. in the Anderson-Prichard Oil Corp. 1 Frances Brownfield Christmann, Section 49, Block T, D.&W. Survey.

Ed McAdams 1 K. Stoker in central Garza County is drilling below 905 ft. The test is in Section 942, Block 97, H.&T.C. Survey, 6 miles south of Post.

Ross Sears 1 J. E. Price has been shut down at 90 ft. The 5,500-ft. test is 660 ft. from the north and west lines of Section 18, Block 11, E.L. Survey, 2 miles northeast of New Home in the northern part of Lynn County.

In south central Mitchell County, Humble Oil & Refining Co. is set for an 8,500-ft. Ordovician test on the 30,000-acre Elwood ranch. The wildcat has been staked 1,980 ft. from the northeast and southeast lines of Section 49, Block 16, S.P. Survey. With company rig to be used, contract calls for commercial production unless water is found in the Ordovician or granite reached before the Ordovician.

The setback suffered by Terry County's wildcatting program last week, when the Texas Co. abandoned its 5,275-ft. test on the Terry-Yoakum County line, may be short lived. Anderson-Prichard have taked a new wildcat as 1 Brownfield, in Section 49, Block T, D.&W. Survey, 3½ miles southeast of Brownfield and about 15 miles southeast of the Texas Co. failure. Drilling will start immediately.

NORTHERN WEST TEXAS COMPLETIONS

(24-hr. ratings based on last 3 hr. of 6-hr. gages)

Wildcat

Martin County: Wiggins & Hyde 1 Stimson & Burley, NE SW Sec. 4, Blk. 38, T.&P. Sur., dry at 5,003 ft.

Fields

Cedar Lake, Gaines County: Stanolind 4 Bremont, 691 bbl., 522-qt. shot, 4,620-4,767 ft.

Stanolind 3 Raynor, 548 bbl., 285-qt. shot, 4,710-4,845 ft.

Dockery-Robbins, Mitchell County: C. E. Casebolt 1 Franklin, dry at 3,248 ft.

Sharon, Scurry County: Coffield & Guthriel Burney, 220 bbl., pumping 860-qt. shot, 2,233-2,445 ft.

Slaughter, Cochran County: Devonian Oil 8-A Duggan, 728 bbl., 2½-in. casing outlet, 10,500 gal. acid, 5,000-64 ft.

Honolulu Oil 6-3 Igoe Smith, 958 bbl., 2-in. casing outlet, 9,000 gal. acid, 4,995-5,030 ft.
George P. Livermore 4 Boyd, 1,016 bbl., 13,000 gal. acid, 5,014-68 ft.
Slaughter, Hockley County: Honolulu Oil 6-B Mallett, 763 bbl., 2-in. casing outlet, 9,750 gal. acid, 4,930-90 ft.
Magnolia 5-D Mallett, 713 bbl., 3-in. casing outlet, 10,500 gal. acid, 4,900-4,995 ft.
Magnolia 8-G Mallett, 1,263 bbl., 3-in. casing outlet, 10,500 gal. acid, 4,935-5,020 ft.
S. W. Richardson 1 Slaughter, 464 bbl., 2-in. casing outlet, 10,000 gal. acid, 4,880-4,970 ft.
Uscon Drilling Co. 1 Watkins, 276 bbl., 10,000 gal. acid, 4,870-4,967 ft.
Skelly Oil 2 Lincoln, 1,289 bbl., 10,000 gal. acid, 4,955-5,005 ft.
Stanolind 15-A Slaughter, 1,314 bbl., 2-in. casing outlet, 8,750 gal. acid, 4,945-5,030 ft.
Stanolind 22-B Slaughter, 1,488 bbl., 2-in. casing outlet, 9,000 gal. acid, 4,955-5,035 ft.
Texas Co. 1 Baker, 1,655 bbl., 2 per cent water, 10,000 gal. acid, 4,930-5,030 ft.
Texas Co. 3-E Mallett, 853 bbl., 10,000 gal. acid, 4,970-5,048 ft.
Slaughter, Terry County: Gulf Oil 7 Mallett, 1,703 bbl., 10,000 gal. acid, 4,975-5,025 ft.
Texas Co. 1 Murphy, dry at 5,440 ft.
Snyder, Howard County: F. H. E. Oil 3 Dodge, 286 bbl., pumping after 500-qt. shot, 2,75-2,880 ft.
Sinclair Prairie 69 Dodge, pumping 95 bbl., 680-qt. shot, 2,585-2,800 ft.
Wasson, Gaines County: Skelly Oil 2 Robertson, 216 bbl., ½-in. choke, 2,500 gal. acid, 5,135-5,265 ft., P.B. from 5,285 ft.
Wasson, Yoakum County: Continental 1 Stevens, (old well drilled deeper) 756 bbl., ¾-in. choke, 8,000 gal. acid, 4,950-5,150 ft., old T.D. 5,047 ft.
Don Danvers 7-B Willard, 453 bbl., 1-in. choke, 9,800 gal. acid, 5,075-5,290 ft.
Drilling & Exploration 1-B Roberts, 199 bbl., 9/16-in. choke, 10,000 gal. acid, 4,975-5,240 ft.
Magnolia 2 Lynn, 83 bbl. oil, 40 per cent water, pumping, 4,500 gal. acid, 5,136-61 ft.
North Shore 6 Bennett, 822 bbl., 8,000 gal. acid, 5,215-68 ft.
Skelly Oil 3 Cower, 446 bbl., 10,500 gal. acid, 5,070-5,220 ft.

NORTHERN WEST TEXAS ACTIVE WILDCATS

Andrews County: Magnolia 1 Ralph, NE cor. Sec. 20, Blk. 39-A, P.S.L. Sur., prep. to abandon, T.D. 6,434 ft.
Phillips 1 University-Drews, NW NE Sec. 32, Blk. 10, University Lands Sur., top Ellenburger 8,368 ft., P.B. to 8,226 ft., P.B. again to 4,000 ft., testing.
Mascho Oil 1 University, Sec. 11, Blk. 13, University Sur., 6⅛ mi. NW of 1 Fisher, 8⅝-in. 1,798 ft., drilling 4,600 ft.
T. P. Coal & Oil and Seaboard 1-C Midland Farms, 660 ft. from S and E lines Sec. 8, Blk. 41, G.M.M. B.&A. Sur., 5,000-ft. test, drilling 4,800 ft.
Borden County: Coffield & Guthrie 1 Conrad, SE NW Sec. 79, Blk. 20, Lavaca Nav. Co. Sur., 3,250-ft. test, drilling 1,840 ft.
Cochran County: O'Neal Drilling Co. 1 Wright, NE cor. Lab. 12, Lge. 60, Martin C.S.L. Sur., 3 mi. N of Dean area, 5½-in. 4,940 ft., T.D. 4,983 ft., acidized 1,500 gal., second treatment 3,500 gal., third treatment 6,000 gal., perf. casing 4,835-88 ft., flowed 20 bbl. fluid per hr., 80 per cent oil, after 20 hr. shut in then died.
Helmerich & Payne 1 Slaughter, 330 ft. from N and 290 ft. from W lines Lab. 67, Lge. 136, Armstrong C.S.L. Sur., 5,500-ft. test, drilling below 4,444 ft.
Gaines County: Amon G. Carter 4-D Wasson, NW SE Sec. 50, Blk. AX, P.S.L. Sur., topped Ellenburger lime 11,000 ft., P.B. to 10,700 ft. to test Devonian, T.D. 11,060 ft.
Garza County: Ed McAdams 1 K. Stoker, NE Sec. 942, Blk. 97, H.&T.C. Sur., 3,500-ft. test, drilling 905 ft.
Lynn County: Ross Sport 1 J. E. Rice, NW Sec. 18, Blk. 11, E.L. Ry. Sur., 5,500-ft. test, set 10¾-in. casing at 300 ft., standing.
Terry County: Anderson-Prichard and Osage 1 Frances Christman, 660 ft. from W and S lines Sec. 49, Blk. T. D.&W. Sur., 5,500-ft. test, spudding.
Yoakum County: Dr. Sam Dunn 1 Moore, Sec. 486, T.D. 5,320 ft., shows of oil, drilling plug, prep. to test at 5,309-20 ft., T.D.
Shell 1 M. L. Hammer, 330 ft. from W and S lines Sec. 490, Blk. D. J. H. Gibson Sur., 5,700-ft. test, drilling water well.

TEXAS PANHANDLE

AMARILLO, Tex., July 14.—Completions and new locations in the Panhandle field this week marked a decided decrease as compared to previous weeks. Only 10 new locations were announced for the field against 52 registered the week before. However, the annual total is still high. Up to this date 566 new locations have been made during 1941, a total higher than the average for an entire year in the life of the field. Gray County received eight of the new locations and Hutchinson County, two.

Nine wells were completed in the field last week. All were for oil production with a total daily potential of 1,484 bbl. There were no gas wells and no dry holes in the field proper. In Hemphill County the I.T.I.O. wildcat test on the Wiggins land southwest of Canadian was abandoned.

TEXAS PANHANDLE COMPLETIONS

(24-hr. pumping gages)

Carson County: Perkins-Prothro 11 Burnett, 34 bbl., 2,972-3,038 ft.
Gray County: Coronado Oil 2 Davidson, 386 bbl., 105-qt. shot, 2,998-3,076 ft.
Cree & Hoover 1 Griffith-Davidson, 59 bbl., 340-qt. shot, 2,920-3,000 ft.
King Oil 9 Donkin, 172 bbl., 180-qt. shot, 3,225-3,280 ft.
Pampa Prod. 0 Harrah, 27 bbl., 630-qt. shot, 3,111-3,211 ft.
Skelly Oil 125 Schaffer, 256 bbl., 485-qt. shot, 3,175-3,252 ft.
Hutchinson County: Phillips Pet. 69 Cockrell ranch, 183 bbl., 320-qt. shot, 2,900-76 ft.
Stanolind Oil 26 Watkins A, 302 bbl., 608-qt. shot, 2,914-3,011 ft.
Stekoll Oil 6 Canadian L, 65 bbl., 2,690-2,873 ft.
Hemphill County: I.T.I.O. 1 Wiggins, Sec. 55, Blk. 1, I.&G.N. Sur., dry at 4,028 ft.

SOUTHEAST NEW MEXICO COMPLETIONS

Wildcat

Chaves County: Elliott 1 State, NW NE 16-11-31, dry at 3,992 ft.

Fields

Jackson, Eddy County: Danciger 2-B Turner, SW SW 17-17-31, 14 bbl. an hr. at 3,448 ft.
Loco Hills, Eddy County: Arnold 2-B Arnold, NE NW 34-17-30, 22 bbl. at 3,281 ft.
Wooley 4-D Wooley, SW NW, 31-17-30, 44 bbl. at 3,018 ft.
Lovington: Lea County, Turner 1 Webb Govt., SW NW 31-16-37, 66 bbl. at 4,990 ft.
Maljamar, Lea County: Carper 6-N Simon, SE SE 29-17-32, 350 bbl. at 4,013 ft.
Red Lake, Eddy County: Red Lake 2 Williams, SW NW 21-17-28, 45 bbl. at 2,013 ft.
Rhodes, Lea County: Krupp & Flaherty 3-B Moberley, 96 bbl. at 3,298 ft.

Drilling Report

Chaves County: Martin 1 Stephens, NW NE 22-15-29, drilling 3,650 ft.
Eddy County, Fair 1 Falkenberg, SW NW 24-18-26, drilling 1,615 ft.
Flynn 1 Evans, SW SW 18-17-35, drilling 848 ft.
Hegwar 1 Root, NW NE 12-17-29, drilling 2,115 ft.
Hightower 1 Grier, NW NW 12-17-29 ft.
Sanders 1 De Temple, SW SW 27-19-31, drilling 1,135 ft.
Lea County: Culbertson & Irwin 1 Wingfield, NE NW 4-19-33, rig.
Fullerton 1 State, NE SE 18-16-33, drilling 4,456 ft.
Kenwood 1 State, NE NW 32-24-37, drilling 3,040 ft.
Leonard & Van Welch 1 State, NW NW 18-20-33. 3 bbl. an hr. at 3,103 ft.
Polvhar 1 Williams, NW SE 33-19-37, drilling 2,650 ft.
Richmond Drlg. Co. 1 State, SW SE 22-17-33, drilling 3,732 ft.
Rutledge 1 Mitchell, SE SE 17-17-32, drilling 4,038 ft.

North Central Texas Fields

(Continued from Page 63)

Sec. 421, T.E.&L. Sur., 6,000-ft. test, top Marble Falls 4,409 ft., drilling 4,639 ft.

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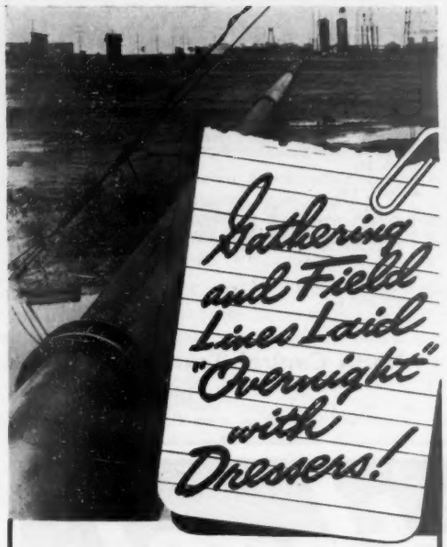

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F. H. E. Oil Co. and Fleming-Kimbell Corp. 1 Graham, SE cor. Sec. 2912, T.E.&L. Sur., 5,000-ft. test, top Ellenburger 4,803 ft., 7-in. casing at 4,908 ft., T.D. 4,927 ft., moving in spudder.

A. B. Holland 1 F. F. Lisle, 150 ft. from N and E lines S/187.8 acres Sec. 112, T.E.&L. Sur., curing titles, T.D. 600 ft.

T. D. Humphrey 1 Williamson, 1537 ft. from N and 330 ft. from E lines Sec. 601, T.E.&L. Sur., perf. casing 4,980-5,020 ft., drilling out plug, T.D. 5,249 ft.

Tom B. Medders 1 J. W. Daws, 933 ft. from N, E, S and W lines NW¼ T.E.&L. Sur., 5,500-ft. test, location.

Shell 1-A Bloodworth, Sec. 151, T.E.&L. Sur., 6,200-ft. test, perf. casing 4,870-4,912 ft., treated 3,000 gal. acid, swabbed 75 bbl. oil and 20 bbl. water in 24 hr., shut in for storage.

Eight New Wildcats Scheduled For West Central Area

FORT WORTH, Tex., July 14.—The announcement of eight wildcat locations in seven different counties and the completion of a gas-producing wildcat in Shackelford County highlighted activity in this district for the week. Two of the new tests have been staked in Brown County and one each in Fisher, Callahan, Coleman, Comanche, Jones and Palo Pinto counties.

In Brown County, drilling is scheduled to start before August 1 on a 2,500-ft. test 1 mile southwest of Byrd. The operator is J. C. Ort who has staked 1 J. F. McGhee 330 ft. out of the northeast corner of a 160-acre lease in Section 49, H.&T.B. Survey.

A second wildcat test in the same county is the Central Texas Gas Co. 1 W. T. Davis heirs, spotted 660 ft. from the north and east lines of W. K. Dalton Survey 57. Contract depth was not announced.

The deepest wildcat to be drilled in Fisher County and the first one to be drilled in the southwest part of the county in 10 years is scheduled for spudding later this month. Shell Oil has staked this 7,250-ft. venture as 1 J. H. Vaughn, 467 ft. from the north and 1,787 ft. from the west lines of a 325-acre tract in Section 205, Block 3, H.&T.C. Survey, 10 miles southwest of Roby.

The immediate drilling of a 1,300-ft. wildcat 8 miles southwest of Baird in Callahan County has been announced by John D. Kynaston. The location of 1 Ella Moore Seale is 508 varas from the west and 237½ varas from the south lines of the south 192½ acres in the J. H. Brown Survey 254. This will be the first test drilled on the Seale ranch property which adjoins the Moutray and Hickman-Flores shallow pools to the west.

Two miles northeast of Novice in Coleman County, States Oil Corp. has staked 1-B Frank Hudson, a 3,600-ft. wildcat test. No. 1-B Hudson is located in the SW¼ of a 430-acre lease in Section 22, Block 2, T.&N.O. Survey.

In Comanche County, O. L. Johnson will drill 1 Jesse Barnes, in the Swanson Yarberry and Walker Survey. The test is contracted to a sand which it should encounter at an approximate depth of 1,500 ft.

T. D. Humphrey of Dallas is scheduled to start a new 2,500-ft. wildcat in Jones County, 5 miles northwest of Hawley. The test, 1 Mary Triplett, was staked on a 320-acre tract in Section 199, James Gocher Survey.

Palo Pinto County will have a 3,000-ft. test 1 mile west of Strawn with Gallagher & Hughes drilling on a Texas Co. fee tract. The wildcat is 330 ft. from the east and south lines of a 21.11-acre lease in the H. Bird Survey.

Shackelford County Wildcat Finds Gas in Strawn

R. H. Roark 1 Elliott, a wildcat 6 miles south of Albany in Shackelford County, may be completed as a gas producer. The test found lower Strawn sand showing gas at 2,848-50 ft. and underreamed casing to top of the pay. The hole was deepened 5 ft., where the well tested 6,600,000 cu. ft. daily with 1,120 lb. pressure.

The wildcat was originally planned to test the Ellenburger lime. However, it is possible that operators will complete the well in the gas sand and use the gas to repressure shallow pools in the area.

Jones County Link Well Gaged

Butler & Horne Drilling Co. 1 C. C. Lenderman, Jones County test, which is indicating a possible link between the Lewis-Steffens and Sandy Ridge pools, has been officially completed. On final gage the well flowed at the rate of 79.25 bbl. in 7 hours through ¼-in. choke from pay at 1,906-23 ft., total depth.

WEST CENTRAL TEXAS COMPLETIONS

Wildcats

Brown County: Harry E. Murray 1 J. H. Fry, John Williams Sur. 33, dry at 1,428 ft.

Callahan County: Merry Bros. & Perini 1 Sam De'Spain, dry at 3,756 ft.

Coleman County: McKissick & Robertson 1 W. H. Finley, dry at 3,526 ft.

Jones County: J. L. McMahon 1 G. L. Miller, Lot 13, Warren subd., DeWitt C.S.L. Sur. 125, dry at 2,911 ft.

Palo Pinto County: W. K. Gordon 1 Crouch, Sec. 87, Blk. 3, T.&P. Sur., dry at 3,557 ft.

Shackelford County: Cecil Young 4 Simpson, 2,390 ft. from S and 1,070 ft. from E lines W½ Sec. 13, B.A.L. Sur., dry at 518 ft.

Taylor County: W. H. Peckman 1 Fred Perry, 330 ft. from N and W lines Lot 5, Grimes Co. Sch. Lds. 124, 71 bbl. in 24 hr., pumping natural, 2,013-19 ft.

Fields

Akard, Jones County: Pet. Prod. 2 Akard, 125 bbl. in 24 hr., 1/32-in. choke, 2,129-41 ft.

Avoca, Jones County: King Oil 2 Almquist, 140 bbl. in 6 hr., 35/64-in. choke, est. 400 bbl. daily, top Palo Pinto lime 3,201 ft., 3,203-07 ft.

Buff Creek, Shackelford County: Hickok & Reynolds 2-A Swenson, dry at 1,537 ft.

Cisco, Eastland County: Hickok Prod. & Dev. Co. 3 Wright & Harrell, 91 bbl. in 24 hr., flowing natural, 3,349-69 ft

Hamby, Shackelford County: E. H. R. Sabens 1 Shotwell, 40 bbl. in 24 hr., pumping, 1,609-17 ft., T.D. 1,648 ft.

Lewis, Jones County: Fain-McGaha 10 Ann Shaheen, pumped 142 bbl. in 19 hr., est. 170 bbl. daily, 30-qt. shot, 1,890-96 ft.

Loving, Stephens County: Wittmer Oil 1 McKelvin, junked, lost hole 1,320 ft.

Noodle, Jones County: Humble 9 Irwin, 210 bbl. in 24 hr., ¾-in. choke, 2,369-93 ft., T.D. 2,401 ft.

Pottsville, Hamilton County: Lone Star Gas 1 O. K. Rea, dry at 2,935 ft.

Sewalt, Brown County: Hou-San Oil 4 Sewalt, pumped 6 bbl. in 24 hr., 1,000 gal. acid, 931-45 ft.

Stith, Jones County: Danciger Oil 3 Kelso, dry at 2,750 ft.

Miscellaneous Pools

Shackelford County: R. H. Roark 6 Elliott, dry at 830 ft.

Eastern Texas Fields

(Continued from Page 67)

Wortham, Freestone County: J. B. Daniels 1 Beall, 22 bbl. oil and 96 bbl. water in 24 hr., 2,937-42 ft., P.B. from 2,974 ft.

EASTERN TEXAS ACTIVE WILDCATS

Anderson County: Huddleston & Prater 1 Praff, R. Allen Sur., 5 mi. NW of Palestine, S.D. 1,604 ft.

Angelina County: S. D. McDaniel 1 Bonner, Sarah Odel Sur., T.D. 1,210 ft., P.B. to 1,020 ft., S.D.

Camp County: Talco Asphalt Co. 1 McKenzie, L. Williams Sur., ¾ mi. W of Pittsburg field, fishing drill stem at 7,828 ft.

Cherokee County: Bobby Manziel 1 Douglas, 463 ft. from W and 227 ft. from N lines SE 79-acre tract in J. W. Brock Sur., running Schlumberger test, no depth given, tight well.

Fannin County: H. W. English 1 Parkhurst, M. P. Davis Sur., 7 mi. W of Leonard, drilling 800 ft.

Freestone County: Westbrook & Whistler 1 Coleman, H. Howard Sur., 2½ mi. SW of Streetman, set 10-in. casing at 90 ft.

Gregg County: Roger Lacy 1 Flannigan, 9,450 ft. from S and 1,555 ft. from W lines of H. Edwards Sur., 8 mi. due S of Willow Springs, set 9⅝-in. casing at 240 ft..

Henderson County: British American Oil 1 Young, Joseph Rice Sur., 7½ mi. SW of Athens, top Trinity sand 6,100 ft., Glen Rose 6,320 ft., drilling 6,993 ft.

Houston County: T. C. Chism and G. L. Porter 1 P. D. Austin, Frank Johnson Sur., 1½ mi. SW of Cockrell, rigging up, first report.

Lone Star and Trinity Corp. 1 G. L. Bolton, 467 ft. from S and 1,400 ft. from E lines of N½ of 162-acre tract in G. W. Wilson Sur., 2 mi. SE of Porcilla, fishing at 5,445 ft.

Navarro County: W. H. Clement 2 Allen Eden (old well drilling deeper), 1,933 ft. from SE and 881 ft. from NE lines of 708-acre tract in M. Shire Sur., old T.D. 311 ft., first report.

J. B. Daniels 1 P. J. Jones, 150 ft. from NW and NE lines of 100-acre tract in T. J. Jordan Sur., moving in material, first report.

Robertson County: Cox & Bentley 1 Clark Kello, 1,140 varas from NW and SW lines of J. M. Bustilla Sur., running 10-in. casing at 200 ft., first report.

Rusk County: M. D. Bryant 1 L. H. Evans, 416 ft. from S and 467 ft. from E lines of George May Sur., rigging up, first report.

G. C. Gasty 1 Kangarga Bros., 467 ft. from SE and 1,170 ft. from NE lines of 100-acre tract in T. Wood Sur., 8 mi. W and N of Laneville, top Woodbine 4,065 ft., ran D.S. test, no results, preparing to abandon.

R. S. Kirby 1 D. R. Richardson, 467 ft. from N and E lines of Blk. 5, J. I. Sanches Sur., 9 mi. W of Laneville, rigging up.

L. O. McMillan 1 Pool, George May Sur., Laneville area, flowed 50 bbl. fluid through open tubing, 6 to 10 per cent water, T.D. 4,128 ft.

Wood County: N. P. Powell 1 Markey & Miller, 467 ft. out of the SW cor. of H. H. Edwards Sur., rigging up, first report.

Bobby Manziel 1 Barney Holmes, 834 ft. from S and 260 ft. from W lines of T. J. Rusk Sur., plts, first report.

California Fields

(Continued from Page 79)

per cent cut, T.D. 3,709 ft., gravel-packed perf. 3,007-3,365 ft., 3,405-3,709 ft., completed in Ranger zone.

LOS ANGELES BASIN OUTPOSTS OR DEEP TESTS

Dominguez, Los Angeles County: Dominguez Associates 1 Clark, 29-3s-13w, drilling 7,234 ft. in oil sand, elev. 35 ft.

Lebow-McNee Oil Co. 1 Bouska, 29-3s-13w, drilling 990 ft. with butane outfit, first well west of Main Street, elev. 35 ft.

Hiles-Crawford and associates 1 Willis, 29-3s-13w, drilling in oil sand and shale 7,253 ft., elev. 35 ft.

R. E. Havenstrite 7 Larronde, 29-3s-13w, drilling 2,234 ft. in sand, elev. 40 ft.

Hileford Associates 1 Developers, 29-3s-13w, foundation.

Johnson and Richardson 1 Clemar, 29-3s-13w, drilling 7,253 ft. in oil sand and shale, 7-in. casing cemented 7,169 ft. by mistake, tested wet, stuck and recovered 5½-in. liner and then landed 7,247 ft., elev. 35 ft.

M. P. R. Oil Co. 1 Barnett, 29-3s-13w, drilling 7,260 ft. in oil sand, elev. 32 ft.

West Dominguez Associates 1 Gross, 29-3s-13w, T.D. 7,302 ft. in gray sand, redrilling 7,249 ft. in oil sand, elev. 35 ft.

Inglewood, Los Angeles County: R. R. Bush Oil Co. 1 Merchants, 7-2s-14w, drilling oil sand and sandy shale 8,470 ft., elev. 190 ft.

R. R. Bush Oil Co. 1 Smith, 7-2s-14w, T.D. 8,188 ft. in sand and shale, fishing drill pipe, Nodular shale 8,100 ft., elev. 185 ft.

Federal Oil Co. 2 Smith, 7-2s-14w, T.D. 8,174 ft. in oil sand, flowed small amount of oil by heads, Nodular shale 7,800 ft., elev. 215 ft.

Hogan Pet. Co. 1-A Machado, 7-2s-14w, T.D. 8,175 ft. in oil sand and shale, making production test, top Miocene 5,490 ft., Nodular shale 7,712 ft., elev. 106 ft.

Oscar Howard 1 Valenzuela, 7-2s-14w, drilling 7,990 ft. in sand and shale, top Nodular shale 7,845 ft. elev. 135 ft.

Jergins Oil Co. 2 Howard, 7-2s-14w, location graded.

Royalty Service Corp. 1 Marlow, 8-2s-14w, drilling in sand 7,891 ft., elev. 381 ft.

Texas 8 Smith, 7-2s-14w, rig.

Tide Water Associated 70 Vickers, 8-2s-14w, rig.

Traders Oil Co. 1 Bush, 8-2s-14w, graded location.

Rosecrans, Los Angeles County: R. S. Lytle 1 Anderson, 1-3s-14w, T.D. 8,175 ft., cleaning up debris, elev. 232 ft.

LOS ANGELES BASIN WILDCATS

Chino district, San Bernardino County: Prado Pet. Corp. 1 Lamp, 31-2s-7w, drilling 710 ft. in surface sand, elev. 560 ft.

Coyote West district, Orange County: Wilshire-Annex 1 Comm., 14-3s-11w, drilling 8,865 ft. in hard sand and shale, being drilled by Rocky Mountain Drilling Co.

East Santa Fe Springs district, Los Angeles County: Sierra Pet. Co. 1 Cole, 2-3s-11w, rig.

Manhattan Beach district, Los Angeles County: Dominguez Ext. Oil Co. 1 Sunset, 19-3s-14w, redrilling 5,294 ft., elev. 135 ft.

Mines district, Los Angeles County: Six Companies 1 Poso Seco, 2-3s-15w, hauling in material, joint test by Standard, Union, Texas, Associated, Richfield, and Shell which bought acreage in fee a few years ago.

Palos Verdes district, Los Angeles County: Newton Dev. Co. 1 P.V., 13-5s-15w, drilling 1,810 ft. in hard sand and shale with cable tools, some basalt found.

Puente district, Orange County: Sunset Oil Co. 1 Baldwin, 11-2s-11w, rig erected.

Whittier district, Los Angeles County: Continental Oil Co. 1 Turnbull, 13-2s-11w, hauling in material.

Wilmington district, Los Angeles County: J. F. Wilcox 1 North, 20-4s-13w, drilling 2,298 ft. in sand, elev. 46 ft.

Southwest Texas Fields

(Continued from Page 75)

Salt Flat, Caldwell County: Elimag 6 Dickerson, dry, T.D. 2,363 ft.

Tenney Creek, Caldwell County: Wiegand Brothers 2 Brown, 50 bbl., flowing by heads, top chalk 2,420 ft., T.D. 2,480 ft.

SOUTHWEST TEXAS DRILLING REPORT

Brooks County: Sun 1 Cage, Sur. 141, drilling sand 5,548 ft.

Calhoun County: Gulfboard 1-144 State, San Antonio Bay, drilling shale 9,182 ft.

Duval County: J. P. Rayzor et al 1 Duval County Ranch Co., drilling shale 2,752 ft.

Goliad County: Hundred & One Oil Co. 1 Lutenbacker, T.T. Goliad Sur., Block 25, drilling sand 2,130 ft.

Hidalgo County: W. R. Davis 1 Arizona-Texas Citrus Co., McAllen area, drilling sandy shale 8,500 ft.

W. R. Davis 1 Dawley, Porcion 71, Closner subdivision, drilling shale 2,100 ft.

Jim Wells County: Bridwell Oil Co. et al 1 A. A. Hennant, Los Presnos de Arriba grant, ½ mi. north of Alice, first report.

La Salle County: Trinity Petroleum Co. 1 Storey & Kinley, H.&G.N. Sur., top Wilcox 3,434 ft., cored sand with distillate odor 4,711-36 ft., drill-stem test recovered mud, no working pressure, T.D. 4,856 ft., reaming.

Starr County: Sun 1 Magge, Sur. 99, T.D. 5,478 ft., 5½-in. casing 4,708 ft., W.O.C.

Webb County: Union Oil Co. of California 1 M. V. Volpe, Sur. 1, drilling 750 ft.

Willacy County: Clark & Cowden 1 Yturria Land & Livestock Co., La Salle Vieja area, drilling shale 730 ft.

Louisiana Gulf Coast

(Continued from Page 74)

H. C. Cockburn 1 G. W. Snowden, 22-3n-5e, T.D. 7,210 ft., perf. casing 6,688-90 ft., recovered mud and water with slight show of oil and gas. Prepare to reperforate.

Cameron Parish: George H. Echols 1 Louisiana Land Co., 16-15s-14w, drilling shale and lime 5,520 ft.

Superior Oil Co. of California 1 Calcasieu National Bank, Lakeside field, drilling in sidetracked hole at 6,645 ft.

Iberville Parish: Congo 1 Dreyfus, 61-7s-9e, drilling sand and clay 42 ft.

St. Landry Parish: J. A. Hafner, Jr., 1 P. P. Hidalgo, 26-6s-3e, drilling shale 940 ft.

Terrebonne Parish: Sinclair Prairie 1 A. J. Duplantis, 12-18s-18e, drilling shale and shells, 2,915 ft.

Vermilion Parish: A. Del Cambre et al 1 Ludovic Landry, 54-13s-5e, drilling shale 1,115 ft.

TEXAS GULF COAST

Wildcat Operations Highest in Months; Two Are Testing

By NEIL WILLIAMS

HOUSTON, Tex., July 14.—As wildcat operations along the Texas Gulf Coast district were being increased with five new locations, operators shifted their attention to Matagorda and Wharton counties where casing was cemented for testing in two interesting wildcats.

In the El Campo area, west of the Withers field, Wharton County, Sinclair Prairie 1 H. R. Carlson is bottomed at 8,020 ft., and 5½-in. casing was cemented at 7,672 ft. While details were not available, an electrical log and sidewall cores are reported to have showed sand with oil and gas showings from 7,542-7,552 ft. The Discorbis was topped at 5,148 ft., Heterostegina at 5,385 ft., and the Marginulina at 5,655 ft.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: West Ranch	3	220	16,866
Other fields	15	3,317	89,795
Dry holes: Fields	2		18,530
Total	20		125,191

Approximately 1 mile west of the new Lucky field, Stanolind 1 Mrs. C. Doman, the second well to be drilled in the area since its discovery, is bottomed at 10,000 ft., and 5½-in. casing was being cemented following the running of an electrical log. Details as to what the log showed were not available, but it is assumed that favorable showings were logged in the discovery Frio sand at 8,800 ft. The discovery well was completed for a small producer along with considerable salt water, and the importance of the discovery well will be determined to some extent by the completion of the present well.

JACKSON COUNTY.—Magnolia 1 Vordick, 1 mile east of the Maurbro field, Jackson County, is being swabbed after it failed to flow when tested through perforated casing at 5,242-47 ft. A 15-minute drill-stem test the previous week before casing was cemented, recovered 155 ft. of oil, and 240 ft. of oil-cut drilling mud. The well is showing considerable oil while swabbing and the completion of the well for a producer is expected.

EUREKA FIELD.—A southeast extension and a new sand discovery was indicated for the Eureka field, Harris County, as Jack Frazier prepared to test 8 Varner Realty Co. Located on the down-throw side of a fault, the well was drilled to a total depth of 8,977 ft., and 5½-in. casing was cemented at 8,950 ft., preparatory to testing three sands which showed up favorable on an electrical log. These sands were logged at 8,110 ft., 8,600 ft., and 8,915 ft. Production from the deeper sands would open new sands, while the 8,100-ft. sand produces in one well on the northwest side of the field. Main production is from the Yegua at 7,600-7,700 ft.

New Wildcat Locations Extend Over Wide Area

The new wildcat activity was divided among Montgomery, Tyler, Liberty, Brazoria, and Fort Bend counties, and the locations make a total of more than 25 wildcats which are under way or scheduled to be started throughout the district. This is the largest number of wildcat operations to be listed for the district in several months.

The Wilcox trend gained two important tests. In the Magnolia area, Montgomery County, Glenn H. McCarthy was moving in material for 1 Roscoe Seyle, a projected 9,500-ft. test located about 1 mile west of the Magnolia townsite in the John Scott Survey. The operator controls several hundred acres around the well site and drilling of the well is reported to be supported by major companies and independent operators who hold control of considerable protection in the area. This is the third Wilcox test to be started in the county within recent weeks which has been made exceptionally attractive for Wilcox production in view of recent developments in the Lake Creek field.

About 6½ miles south of Woodville, Tyler County, O. C. Garvey will move in material within the next few weeks for 1 S. H. Reid estate in the Emily Sanderson Survey. The operator controls a block of approximately 3,000 acres and the well is contracted to a depth of 7,700 ft., or 1,000 ft. into the Wilcox.

In the Double Gum area, Liberty County, Marrs McLean et al staked location for 1 E. B. Pickett, Jr., in Section 18 of the H.&T.C. Survey. The location is about 1 mile southwest of two dry holes drilled by George Echols on the E. W. Boyt lease, and about the same distance northwest of an abandoned hole drilled by the old Yount-Lee Oil Co. Sufficient showings were logged in the two wells by Echols to cement casing for testing but they were abandoned due to mechanical trouble.

Pure Oil Co. announced location for another wildcat in the Manor Lake area, Brazoria County. The location is 1 T. L. Smith et al in the J. E. B. Austin Survey which is about 2 miles west of the company's 1 Greenameyer recently abandoned at a depth below 9,000 ft.

Location for a Yegua sand test was announced for the old Boling dome, Fort Bend County, by Mackhank Oil Corp. which obtained a farmout from Tide Water Associated Oil Co. on the G. W. Armstrong lease, about 1 mile from shallow production in the James Scott Survey.

TEXAS GULF COAST COMPLETIONS

Fields

Cordele, Jackson County: Crown Central 6 J. W. Faust, 66 bbl., 7/64-in. choke, perf. casing 2,644-48 ft., T.D. 2,790 ft.

Dyersdale, Harris County: Jack Frazier 1 Carroll Wood, 215 bbl., ¼-in. choke, perf. casing 4,046-66 ft., T.D. 4,077 ft.

Fannett, Jefferson County: Gulf 12-A Bordages, dry, T.D. 8,120 ft.

Garwood, Colorado County: W. R. Davis 2-A L. E. Brownston, 238 bbl., ⅞-in. choke, perf. casing 6,095-6,102 ft., T.D. 6,144 ft.

Hardin, Liberty County: J. R. Nowery et al 3 Humphrey, 165 bbl., ⅞-in. choke, perf. casing 7,604-10 ft., T.D. 7,648 ft.

Hilje, Wharton County: Texas 2 J. Orsak, 28 bbl., 5/64-in. choke, perf. casing 5,208-11 ft., T.D. 5,240 ft.

Lake Creek, Montgomery County: Superior 2 T. A. McWhorter, 197 bbl., 5/32-in. choke, perf. casing 9,769-79 ft., T.D. 9,980 ft.

League City, Galveston County: Phillips 5 Stewart Title Co., dry, T.D. 10,410 ft.

Lolita, Jackson County: W. L. Goldston 6 Missouri Pacific R. R. Co., 176 bbl., ⅛-in. choke, perf. casing 5,932-36 ft., T.D. 5,979 ft.

Maurbro, Jackson County: Humble 4-B Mauritz, 528 bbl., ¼-in. choke, sand 5,230-33 ft.

Port Neches, Orange County: Texas 10-B Polk, 192 bbl., ¼-in. choke, perf. casing 4,323-45 ft., T.D. 5,495 ft.

Red Fish Reef, Chambers County: Humble 21-A-247 State, 144 bbl., ⅛-in. choke, sand 8,700-10 ft.

Tomball, Harris County: Humble 8 W. H. Marten, 461 bbl., ¼-in. choke, sand 5,553-60 ft.

West Columbia, Brazoria County: Texas 40 W. H. Abrams, 300 bbl., ¼-in. choke, perf. casing 5,606-26 ft., T.D. 5,630 ft.

Texas 24 J. G. Phillips, 391 bbl., ¼-in. choke, perf. casing 5,650-69 ft., T.D. 5,687 ft.

West Ganado, Jackson County: Pure 1 E. T. Craven, 114 bbl., ⅛-in. choke, perf. casing 4,742-59 ft., T.D. 6,250 ft.

West Ranch, Jackson County: Magnolia 169-A West Ranch, 75 bbl., ⅞-in. choke, perf. casing 5,525-41 ft., T.D. 5,560 ft.

Magnolia 171-A West Ranch, 77 bbl., ⅞-in. choke, perf. casing 5,749-53 ft., T.D. 5,760 ft.

Magnolia 172-A West Ranch, 68 bbl., 10 hr., ¼-in. choke, perf. casing 5,535-43 ft., T.D. 5,546 ft.

Withers, Wharton County: Texas 98-C Pierce, 102 bbl., ⅛-in. choke, perf. casing 5,348-61 ft., T.D. 5,375 ft.

TEXAS GULF COAST DRILLING REPORT

Brazoria County: Glenn McCarthy 1 J. R. Marmion, S. Carter Sur., drilling shale 11,370 ft.

Fort Bend County: H. C. Cockburn 1 W. C. Leveridge, J. M. McCormack Sur., top Cockfield 6,860 ft., Discorbis Yeguaensis 6,955 ft., Eponides Yeguaensis 7,011 ft., T.D. 7,800 ft., drill stem stuck.

Providence Oil Co. 1 J. J. Settegast, J. McCrary Sur., top Heterostegina 3,652 ft., Textularia Warreni 5,327-57 ft., drilling shale 6,050 ft.

(Continued on Page 87)

Act Governing Placer Claims May Revive Lance Creek

By T. R. INGRAM

DENVER, Colo., July 14. — An extensive drilling campaign on the east side of Lance Creek, which may involve from 24 to 32 wells, will be inaugurated as soon as certain requirements can be complied with as a result of the signing on July 5 of S.B. 4433 by President Roosevelt. The law authorizes the secretary of the interior to grant leases on 1,480 acres on which holders claimed rights under the old placer-claim mining laws. These rights were challenged by Secretary Ickes and litigation was instituted. This resulted in a compromise which could become effective only by an act of Congress. The compromise provides that each lease shall be dated January 1, 1940, and carry a royalty of 12½ per cent from that date on oil produced. Oil produced prior to that date will take a royalty of 4 per cent. Overriding royalties are limited to half of the government royalties, and these will have to be adjusted before the secretary of the interior can grant the leases. While royalty owners have agreed to adjust their interests, it may take several months to obtain all of the required signatures. Operators and acreage involved include the Argo Oil Corp., Ohio Oil Co., Continental-Buck Creek Oil companies, and the Minnelusa Oil Corp., SW Section 25; S½ Section 26; SE NW and E½ SW Section 27; N½ Section 34 and SE 35-36n-65w.

SUMMARY OF COMPLETIONS

Colorado

	No.	Bbl.	Footage
Wildcats	1	.....	3,018

Wyoming

	No.	Bbl.	Footage
Oil wells: Fields	3	412	11,713
Recompletions	2	1,340	.....

Montana

	No.	Bbl.	Footage
Oil wells: Fields	2	550	5,760

Northwest New Mexico

	No.	Bbl.	Footage
Gas wells	1	*2.5	2,025

*Million cu. ft.

Continental Acquires Acreage in San Juan County, New Mexico

Continental Oil Co. was sole bidder for a lease on a tract of 3,720 acres of Navajo Indian land in San Juan County, New Mexico, at a recent sale, the bid being $2.25 per acre. The land adjoins the Rattlesnake field on the south, southeast, southwest, and west. This field is operated by Continental and two deep wells to the Pennsylvanian have been drilled in addition to the development of the shallow production. Continental last summer made extensive geophysical surveys of the area.

Purchasing Adjustments May Benefit Southwest Wyoming

Plans reported under consideration by the Sinclair Pipe Line Co. to build another trunk line from Wyoming to eastern market centers may not materialize as a result of recent changes in Wyoming marketing situation. H. F. Sinclair, chairman of the executive committee of the Consolidated Oil Corp., in his annual report for 1940, dated April 11, 1941, informed stockholders that the company has moved 750,000 bbl. of crude from its Wyoming properties to its Wyoming, Kansas City, and Chicago refineries following completion of a connection between its Salt Creek-Parco line and the Stanolind line from Wyoming to Missouri, and then added: "Circumstances may compel us to build our own lines from Wyoming eastward." The 5-year contract by Stanolind for purchase of Lance Creek Sundance crude for shipment to the East expired July 1 and was not renewed. While no official statement is available, it is believed that expiration of this contract will enable the Stanolind line to handle the Sinclair requirements. Indications of an agreement are seen in the decision of the Sinclair interests to put their Salt Creek acreage into the Salt Creek unit, which is operated by the Stanolind company, as of July 1, as soon as all parties in the unit sign the agreement. The Sinclair-Wyoming Oil Co. has developed major production in the Bairoil district in Carbon and Sweetwater counties, including the Wertz, Mahoney, and Lost Soldier fields.

Clay Basin, Utah, and Cut Bank, Montana, Extended

An extension of the Clay Basin gas field in Utah ⅝ mile to the southeast is imminent in Montana Fuel Supply 1 Sparks, SW SW SE 23-3n-24e, which topped the Dakota at 5,894 ft. and was drilled to 6,016 ft. It made 17,000,000 cu. ft. through the drill stem and casing then was set on top of the sand.

Cut Bank had a small extension on the south in Santa Rita 1 Klein, which had 1,200 ft. of oil in the hole from the Cut Bank sand, and is preparing to test.

COLORADO COMPLETIONS

Trull Creek, Routt County: Craig & Moore 1-X Irwin, C SW NE 33-7n-85w, dry, top pre-Cambrian granite 2,986 ft., top red beds 2,240 ft., T.D. 3,018 ft.

COLORADO DRILLING REPORT

El Paso County: F. F. Hintze 1 State, CEL SE SE 16-11s-60w, S.D. 1,990 ft. (correction).

La Plata County: N. Snatter 1-X Bruce, C SW SW 31-33n-9w, T.D. 4,428 ft., tools recovered, cleaning out to resume.

Moffat County: Mountain Fuel Supply 3-A Musser, CNL NW SW 5-11n-97w, T.D. 5,700 ft., 7-in. at 3,697 ft., testing through perforations at 5,276-82 ft.

Mountain Fuel Supply 1 Lasher, NW NE NE 25-12n-101w, West Hiawatha, old gas well preparing to deepen from 2,755 ft. to test sands which yield oil in East Hiawatha.

Privett & Spangler 1 Stillings, NE SE SE 12-5n-96w, drilling 260 ft., sandy shale.

Rio Blanco County: Texas-California 6 Unit, NW NE SE 27-3n-94w, T.D. 6,487 ft., swabbing and testing.

Buford Oil 1 Government, C SW SW 16-1n-91w, drilling 4,438 ft., hard gray dolomite.

Texas-California 7 Unit, NE SW SE 34-3n-94w, location, Wilson Creek, ¼ mi. NW of 4 Unit, outside well, first report.

WYOMING COMPLETIONS

Lance Creek, Niobrara County: Ohio 4 Richards & Comstock, C NE SW 32-36n-65w, perf. opposite second Leo sand at 5,104-40 ft., 10 bbl. oil and 260 bbl. water daily, will install pump, P.B. to 5,140 ft. from 5,203 ft.

Ohio 6 Converse Sheep, NE SW SE 32-36n-65w, 5½-in. at 5,317 ft., flowed 60 bbl. an hour from fourth Leo sand after 500 gal. acid, and 1,240 bbl. first 24 hr., T.D. 5,453 ft.

Lost Soldier, Sweetwater County: Sinclair-Wyoming 100-A, NE NE NE 10-26n-90w, 400 bbl. per day from Tensleep, top 3,914 ft., T.D. 4,270 ft.

Salt Creek, Natrona County: Stanolind 3 SD-3, NE NW NE 26-40-79w, recompleted in third Sundance after deepening from Lakota at 2,398 ft., flowed 100 bbl. natural in 24 hr.

Osage, Weston County: Whedon Oil 8 Government, CWL SW NE 16-46n-64w, pumped 2 bbl., T.D. 240 ft.

WYOMING DRILLING REPORT

Big Horn County: Ohio 2-A Hoskins, SE SE SE 15-56n-97w, drilling 4,818 ft.

Campbell County: Continental-Texas Gulf 1 Knapp, NE SW SE 4-56n-69w, drilling 5,666 ft., cored sand 5,430-43 ft., tester open 10 min. showed 36 stands of water.

Carbon County: Sinclair-Wyoming 5-C Mahoney, C NW SE 34-26n-88w, T.D. 4,566 ft., P.B. to 4,458 ft., swabbed 30 bbl. oil, 40 bbl. water, P.B. to 4,423 ft., testing.

Sinclair-Wyoming 22-A Wertz, CEL SE SE 1-26n-90w, drilling 5,178 ft., top Sundance 4,130 ft.

Sinclair-Wyoming 23-A Wertz, NE NE NE 12-26n-90w, T.D. 5,537 ft., fishing.

Glen Swartout 3 Union Pacific, NE NE SE 21-22n-78w, spudded, first report, west offset to Martin & Gaylord 1 Horne Brothers, gas discovery, in 1939, in Muddy sand for 7,000,000 cu. ft. at 986-1,000 ft.

Ohio 3 H. & C., C SW SE 27-20n-78w, T.D. 3,717 ft., showing saturation in Dakota, top 3,690 ft., 5½-in. at 3,608 ft.

Sinclair-Wyoming 20 Wertz, NE SW NE 7-26n-89w, drilling 5,929 ft. in Tensleep under heavy oil pressure, top of sand 5,860 ft., 7-in. at 5,856 ft.

Fremont County: Indian Oil 3 Tribal, NW SW NW 23-6n-2w, drilling 693 ft.

Valentine M. Kirk 3 Tribal, NW NW SW 23-6n-2w, drilling 1,082 ft.

Sinclair-Wyoming 3-A Unit, NW NW NE 3-33n-92w, drilling 4,595 ft.

Bison Bason Oil 1 Kirk, CEL NW SW 17-27n-95w, rigging rotary for test to Sundance and Tensleep, contract to Manning & Martin, Inc., in Bison Basin (formerly Buffalo Basin) where wells in Frontier have shown gas, first report.

Hot Springs County: Shot, Sheperson & Kittleson 1 Daly-State, SW SW NW 16-43n-92w, drilling 345 ft. after winter shutdown.

Laramie County: Indian Hills Oil 1 Harding, C NW NW 17-18n-65w, drilling 1,040 ft. in shale.

Lincoln County: K. M. P., Inc., 1 State, NE NE NE 36-25¼-115w, T.D. 2,106 ft., running 10-in. for water shutoff.

Natrona County: General Petroleum 3-16-S (State) NW SW NW 16-35n-77w, drilling 4,648 ft. in Shannon sand, 5½-in. at 4,641 ft.

General Pet. 37-21-G, NW SE SW 21-35n-77w, derrick, Cole Creek, first reoprt.

Stanolind 1-SD-3, NE NE SW 26-40n-79w, formerly No. 1-L, T.D. 2,465 ft., rigging rotary.

Casper Creek Oil 1 State, SW SW NW 36-36n-81w, T.D. 2,612 ft., preparing to run 6¼-in.

Niobrara County: Ohio 10 A. Rohiff, SW NE 32-36n-65w, drilling 3,561 ft.

Ohio 19 Lamb, CSL NW NE 5-35n-65w, drilling 1,481 ft.

Continental 25 Tom Bell, SE SE SE 28-36n-65w, T.D. 5,354 ft., cemented 7-in. at 5,326 ft., 1,000 gal. acid, testing.

Argo 17-B Elliott, SW NE NE 6-35n-65w, drilling 5,337 ft. in Leo sand.

Western Petroleum 1 Mosier, SW SW 31-35n-64w, drilling 665 ft. in shale.

Continental 9-A Schuricht, NW NW SW 5-35n-65w derrick, first report.

Continental 8-A Dielman, NW NW NW 8-35n-65w, rig, first report.

Park County: Texas 5 Sonners, SE NE NE 30-51n-100w, T.D. 3,460 ft., 8⅝-in. 3,288 ft., rigging up pump.

Stanolind 21-X Rosenberg, NE SW NW 25-58n-98w, T.D. 3,034 ft., 7-in. at 3,030 ft., testing through perf. at 2,636-46 ft.

Enalpac Oil & Gas 2 McMahon O.P.C.-1, C SW SW 32-51n-100w, T.D. 3,553 ft., in Tensleep, P.B. to 5½-in. at 3,515 ft., testing.

Enalpac Oil & Gas 1 Purple-O.P.C., SE SE 31-51n-100w, drilling 891 ft.

Husky Refining 2 Morris, SW NE 29-51n-100w, drilling 2,023 ft.

Stanolind 11-X Rosenberg, SE NE NE 26-58n-98w, location, middle fault block, Frannie, first report.

Sublette County: Texas 1-L Government, SW SW SW 27-27n-113w, coring 1,036 ft., 8⅝-in. at 933 ft.

Marvel Oil 1-L Government, SE SE SE 28-27n-113w, T.D. 1,197 ft., P.B. to sand at 1,130-55 ft., testing.

Charles Lackey 1 Government, NE SE SW 33-27n-113w, running 5½-in. to bottom at 1,650 ft.

Klumpe Syndicate 1 State, NE SW NE 28-27n-113w T.D. 1,792 ft., testing show gas at 1,512 ft.

Sweetwater County: Rocky Mountain Drilling 1 State, SW SW SW 36-20n-104w, S.D. 6,447 ft.

West States Pet. 1 Unit, C SE SE 10-12n-101w, drilling 932 ft.

Gus Pongratz 1 Clark, C NW NE 22-14n-104w, drilling 5,710 ft.

Sinclair-Wyoming 101-A, NW NW NW 11-26n-90w drilling 3,349 ft.

Mountain Fuel Supply 2 Newberger, SW NW NW 18-12n-99w, drilling 2,056 ft.

Sinclair-Wyoming 102 Lost Soldier, SE SE SE 3-26n-90w, location.

Vermillion Oil 1 Government, SW NE NE 6-12n-99w, drilling 1,003 ft.

Weston County: Joseph Dornacher 1 Kinney & Collins, NW NW NE 33-45n-61w, S.D. 586 ft., swabbed 2 bbl. heavy oil.

Pierre Laflelshe 1 Dober, NW NW NE 21-45n-65w drilling 3,250 ft. in Granerous shale, will start coring for Muddy sand at 3,500 ft.

MONTANA COMPLETIONS

Cut Bank, Glacier County: Santa Rita 1 Klein, C NW NW 21-32n-5w, 7-in. at 2,770 ft., Cut Bank sand 2,760-2,810 ft., main pay 2,800-10 ft., 1,200 ft. oil, 40-qt. shot at 2,730-2,810 ft. before running casing, will test after drilling out cement, T.D. 2,815 ft.

Glacier Prod. 6 Bonnet, CSL SW NE 4-32n-5w, 7-in. at 2,898 ft., show oil in Sunburst at 2,842-92 ft., Cut Bank sand 2,898-2,945 ft., main pay 2,926-35 ft. and 2,938-43 ft., 2,000 ft. oil, swabbed 425 bbl. first 24 hr., T.D. 2,945 ft.

MONTANA DRILLING REPORT

Blaine County: Montana-Dakota Utilities 1 Cole, NW NW NW 11-31n-19e, location.

Carter County: Pete Dickerson 1, SE NE SW 8-9s-61e, T.D. 600 ft., 12½-in. at 300 ft., first report, Six Mile district, SE cor. of state.

Fallon County: Carter 1 Northern Pacific Unit, C SE SW 19-4n-62e, drilling 6,428 ft. in shale and anhydrite, will set pipe at 6,500 ft.

Garfield County: California Co. 4 Charles, C SE NW 21-15n-30e, drilling 5,395 ft.

Glacier County: Glacier Prod. 7 Miller, CWL SE NE 32-33n-5w, drilling 2,310 ft.

Glacier Prod. 1 Walburger unit, SW SW NE 18-33n-4w, drilling 2,515 ft.

Consolidated Gas 1 Frary-Tribal-208, NE NE SW 19-32n-5w, drilling 900 ft., 10¾-in. 501 ft.

Par Oil 1 Tribal-200, NE NE SE 13-32n-6w, drilling 535 ft.

R. C. Jeffries 1 Tribal-201, NE SE NE 30-32n-5w, running 8⅝-in. at 2,295 ft. to shut off water at 2,240-70 ft.

K. D. Pardee 1 Tribal-198, SW SE NW 13-32n-6w, drilling 2,375 ft.

Texas 1 Government, C NW SW 8-32n-5w, drilling 2,345 ft.

Pioneer Lumber 1 Anderson, NW NE NW 31-32n-5w, drilling 2,050 ft.

Ralph N. Davis 1 Tribal-205, NE NE NE 25-32n-6w, drilling 2,250 ft.

Hannah-Porter 3 Tribal-189, SW SE SE 19-32n-5w, spudded.

Santa Rita 14 Tribal, NW NW NW 10-35n-6w, cemented 7-in. at 2,897 ft.

(Continued on Page 88)

Good Wells in Winterfield and Reed City Raise Production

By OTTO C. PRESSPRICH

SAGINAW, Mich., July 14.—While Michigan oil interest remained riveted on the spectacular Reed City development, potential of Clare County's Winterfield pool was boosted materially last week by the drilling of one well and deepening of another.

Deepened from 3,156 ft. in the Traverse where it had been yielding around 30 bbl. a day on the pump, Sun Oil Co. 1 Thayer was drilled to the Monroe at 3,735 ft. with a result that initial production was announced as 1,261 bbl. in a 24-hour period. It settled to around 700. The well is in Section 29. In Section 35, Sun A-4 State was dry at 3,905 ft. and it was planned to use the hole for brine disposal. Meanwhile the A-5 State in Section 36 was completed at 3,782 ft. for initial natural of 455 bbl. a day, settling to around 300.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Allegan County	2	62	3,219
Bay County	1	54	2,860
Clare County	2	1,746	7,517
Osceola County	1	12,000	3,625
Ottawa County	2	21	3,733
Gas wells: Isabella County	2	*3.29	2,685
Missaukee County	1	2.56	1,463
Dry holes: Clare County	1	.....	3,906
Kalamazoo County	1	.....	1,036
Mecosta County	1	.....	3,641
Ottawa County	1	.....	1,825
Roscommon County	1	.....	3,721
Van Buren County	2	.....	2,617
Total	18	.....	41,818

*Million cu. ft.

New wells were being started in Osceola's Lincoln Township as a result of the 12,000-bbl. Weber Oil Co. 1 Clark completion, fourth big well in the new field. Besides extending the field, oil men declared it was significant that the big pay was hit structurally higher than in the other producers, an indication, they believe, that the field's productive life may be extensive. Gulf Refining Co. 1 Henry was next in line for completion.

Gulf Test Dry in Niagara Lime

Niagara pay zone prospects were lost on Gulf's Bateson deep test, Michigan's deepest, in Bay County. In a hard formation, the hole now is below 8,500 ft. Goal is 10,000 ft. At 2,860 ft. in Monitor of Bay, L. C. MacGregor 1 Swantek was producing 54 bbl. on pump after being acidized.

L. & S. Drilling Co. 1 Cottrell became the third commercial gas well for the Isabella Deerfield pool and extended production ½ mile west. Gas wells also were completed in Fremont of Isabella and Riverside of Missaukee.

Of the week's 18 completions, eight produced oil, three were gas wells, and the nine dry holes included wildcat tests in Kalamazoo and Roscommon counties. Hopes of a new field in north Bloomingdale, Van Buren, was dealt a blow as a result of two tests completed as dry. Each had a show of oil, but salt water spoiled prospects.

The first well in Roscommon County, Eugene Hilliard 1 State, Section 34 of Roscommon Township, continued to produce heavily, reports being 1,200 bbl. a day or better, pinched. The wildcat success has resulted in plans for several more tests in the vicinity, which is state forest lands. Sun Oil Co. 3 Hogan, in Roscommon's Lake Township, was a dry hole.

The state Conservation Department issued 16 more permits, making the 1941 total 429. Four are for Winterfield tests in Clare County, two each for Montcalm, Missaukee, Allegan and Isabella, one each for Bay, Osceola, Roscommon and Ottawa.

MICHIGAN COMPLETIONS

Allegan County

Monterey Township: H. L. Wheeler 1 Seabright, SE NE SE 26-3n-13w, location abandoned.

Overisel Township: H. C. Nelson 5 Peters, C E½ SW 9-4n-14w, 22 bbl., acid, T.D. 1,483 ft.

Salem Township: Union Oil Co. 1 Fein-Weist, SE NE NW 2-4n-13w, 40 bbl., acid, T.D. 1,736 ft.

Bay County

Monitor Township: L. C. MacGregor 1 Swantek, SE NE NW 2-14n-4e, pumping 54 bbl., acid, T.D. 2,860 ft.

Clare County

Winterfield Township: Sun 1 Thayer, C E½ SE SW 29-20n-6w, 1,291 bbl., natural, T.D. 3,735 ft. (deepened from 3,156 ft.).

Sun A-4 State-Winterfield, C S½ NE SE 35-20n-6w, dry, T.D. 3,906 ft.

Sun A-4 State-Winterfield, C S½ NE SE 35-20n-6w, 455 bbl., natural, T.D. 3,782 ft.

Isabella County

Deerfield Township: L. & S. Drilling Co. 1 Cottrell communitized, SW SE SW 19-14n-5w, 1,950,000 cu. ft. gas, T.D. 1,417½ ft.

Fremond Township: Belvidere Oil Co. 1 Bandeen communitized, SE SE NW 22-13n-5w, 1,340,000 cu. ft. gas T.D. 1,267½ ft.

Kalamazoo County

Alamo Township: C. A. Daniels 1 Bellinger & Bowes, SE NE NW 34-1s-12w, wildcat, temporarily abandoned 1,036 ft.

Mecosta County

Millbrook Township: Freeman Oil Co. 1 Reynolds, C N½ NW SW 34-13n-7w, wildcat, dry, T.D. 3,641 ft.

Missaukee County

Riverside Township: Taggart Bros. Co. 23 Wonsey-Dieterman, C SW 16-21n-7w, 2,560,000 cu. ft. gas, T.D. 1,463½ ft.

Osceola County

Lincoln Township: Weber Oil Co. 1 Clark, SW SE NE 30-18n-10w, 12,000 bbl., natural, T.D. 3,625 ft.

Ottawa County

Georgetown Township: Fisher-McCall Oil & Gas Co. 1 Cheyne, SW NW NW 2-6n-13w, dry, T.D. 1,825 ft.

Tallmadge Township: William H. Clark 2 Baldwin, NE NE SW 34-7n-13w, acid, pumping 12 bbl., T.D. 1,894 ft.

Smith Petroleum Co. 1 Wasolowski, SE SW SW Sec. 27, acid, pumping 9 bbl., T.D. 1,839 ft.

Roscommon County

Lake Township: Sun Oil Co. 3 Hollister-Hogan, C S½ SE SE 31-23n-4w, wildcat, dry, T.D. 3,721 ft.

Van Buren County

Bloomingdale Township: Borough & Fox 1 Wilmont, SE NE NE 2-1s-14w, dry, T.D. 1,332 ft.

W. Spencer Cook 1 Treend, NE NE NW 12-1s-14w, dry, T.D. 1,285 ft.

AVERAGE DAILY PRODUCTION
MICHIGAN

	July 12	July 5
Temple	5,760	5,600
Buckeye	2,320	1,600
Van Buren County	2,970	2,810
Walker	4,210	3,960
Allegan County	3,970	3,680
Wise	1,180	1,200
Adams	3,540	3,521
Winterfield	2,810	2,460
Reed City	1,820	1,600
Total Michigan	39,630	38,810

Texas Gulf Coast

(Continued from Page 85)

Jefferson County: A. T. McDannald 1 Hebert & Trust, F. Hardin Sur., top Discorbis 7,893 ft., Cyroldina 8,443 ft., Heterostegina 8,781 ft., drilling shale 9,891 ft.

La Vaca County: Herton 1 L. Hohmann, William Taylor Sur., drilling shale 5,705 ft.

Liberty County: Winston P. Henry 1 E. J. Stoesser, H.&T.C. Sur. 115, top Hockleyensis 7,362 ft., Cadell 8,030 ft., Cockfield 8,542 ft., dry, T.D. 8,647 ft.

Rowan Drilling Co. et al 1 B. H. Willis, H.T.&B. Sur. 7, top first Discorbis 5,330-60 ft., Heterostegina 5,720-50 ft., flat Marginulina 5,900-30 ft., drilling shale 6,785 ft.

Matagorda County: Stanolind 1 L. Wolf, Reese Sur., drilling shale 8,014 ft.

Orange County: William Dickey et al 1 George Locke, T. H. Breece Sur., top first Discorbis 5,502 ft., large Discorbis 5,959 ft., drilling sand and shale 6,398 ft.

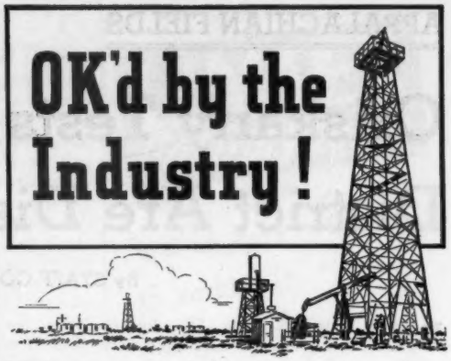
Superior Oil Corp. 1 East Beaumont Townsite Co., Nancy Davis Sur., derrick.

Polk County: Gulf 48 Wing, deep Wilcox test, Segno field, drilling shale 10,537 ft.

Tyler County: Republic Production 52 Hurd-fee, deep Wilcox test, Joe's Lake field, drilling shale 10,343 ft.

Wharton County: Barnsdall 1 Wallace Hancock, L. L. Miller Sur., drilling shale 5,830 ft.

OK'd by the Industry!



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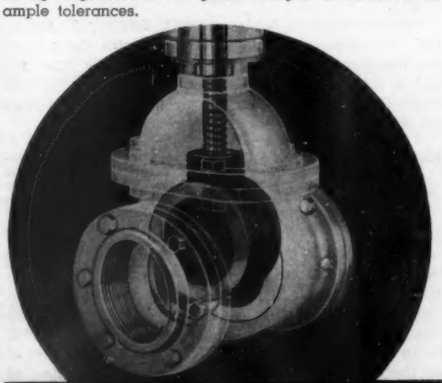

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Oriskany Tests in Ravenswood District Are Disappointing

By STAFF CORRESPONDENT

PITTSBURGH, Pa., July 14.—Reports from the Ravenswood district, Jackson County, West Virginia, new development proved disappointing during the week. Here, the United Carbon Co. bottomed the test on the A. B. Stalnaker farm, ¾ mile north of Sandyville, 72 ft. in the Oriskany sand with no showing of gas. The Corniferous lime was topped at 4,742 ft.; Oriskany 4,861 ft., and total depth of 4,933 ft. It will be shot this week.

About ¼ mile south of Odaville in this district, this company bottomed the test on the M. L. Thrash farm at 4,990 ft. with the Corniferous lime topped at 4,787 ft. and the Oriskany sand at 4,902 ft. It was filled back to 4,951 ft. and given a 70-qt. shot between 4,902-50 ft. It then gaged 583,000 cu. ft. of gas 1 hour after shot.

In the same district Joe Rubin et al is drilling through the Oriskany sand in the test on the Jackson County Bank (William H. Hunter) lease and at 4,956 ft. it has frozen back to 298,000 cu. ft. of gas from about 600,000 cu. ft., or highest gage. The Corniferous lime was topped at 4,797 ft., Oriskany sand 4,911 ft. with the first gas showing 13 ft. in the sand instead of near the top which has been normal in other wells in the area. This test appeared high on structure. This operator topped the Corniferous lime at 4,863 ft. in the test on the G. H. Ott heirs farm and at 4,710 ft. in the test on the W. B. Smith farm.

Activity continues high in this new area but from the irregular correlations of the tests, the structure is proving an enigma. The same appears true of the upper Ripley district which also had varying success.

Ripley District

Wells in Oriskany

In addition to the wells already mentioned in Ravenswood district, Jackson County, there was a fair completion in the deep sand in Ripley district and two other wells drilling through the sand, only one of which shows promise. The test of the United Fuel Gas Co., distinctly a wildcat, 5011 D. J. Rogers, topped the Corniferous lime at 4,922 ft., Oriskany sand 5,012 ft., and shut down at 5,029 ft. with a natural open flow of 7,117,000 cu. ft. of gas. It is located about 2¼ miles north of the town of Kenna.

About 2½ miles northeast of the town of Ripley, McIntosh & Grimm are drilling through the Oriskany in a test on the C. M. Winter farm. The Corniferous lime was topped at 4,942 ft., Oriskany 5,052 ft., and at 5,083 ft. there is a showing of only 68,000 cu. ft. of gas.

Further south in Ripley district, Godfrey L. Cabot, Inc., is completing 8 J. L. McLean with the top of the Corniferous lime at 5,153 ft., Oriskany 5,253 ft., and at 5,293 ft. the gas volume is 455,000 cu. ft. The highest gage while drilling through the sand was 511,000 cu. ft.

Ripley district: West Virginia Gas Corp. 2 R. S. Coleman, 2,600,000 cu. ft. of gas after shot, Salt sand 1,460-1,928 ft., Big lime 1,928-75 ft., Big Injun 1,975-2,000 ft., Berea 2,450-78 ft., Corniferous lime 5,002-5,106 ft., Oriskany 5,106-46 ft., gas 5,108-19 ft. and 5,129-31 ft., shot 5,106-46 ft., T.D. 5,176 ft.

In Monongalia County the deep test of the Hope Natural Gas Co. on the H. C. Greer et al lease in Morgan district, is drilling at 6,407 ft. In Freemans Creek district, Lewis County, this company's rotary test on the Albert Woofter farm is drilling at 3,000 ft. In Preston County the wildcat of M. E. Davis et al on the Coburn et al lease in Valley district is now at 755 ft. Here, 158 ft. of 10-in. casing was set and then 493 ft. of 8¾-in.

WEST VIRGINIA COMPLETIONS

Braxton County

Birch district: Pittsburgh & West Virginia Gas Co. 7819 Troy Nottingham, dry, through Injun sand, T.D. 1,920 ft.

Otter district: Pittsburgh & West Virginia Gas Co. 7798 Lewis Dunn, 68,410 cu. ft. gas, Blue Monday sand, drilled through Injun, T.D. 2,457 ft.

SUMMARY OF COMPLETIONS

Southwest Pennsylvania

	No.	Bbl.	Footage
Gas wells	8	*1.0	23,333
Dry holes	2	.....	4,013
Total	10	.....	27,346

West Virginia

	No.	Bbl.	Footage
Oil wells	2	7	2,542
Gas wells: Oriskany	1	*2.5	5,176
Other	10	*2.3	29,938
Dry holes	4	.....	8,562
Total	17	.....	46,218
Recompletions	2	*0.1	.....

*Million cu ft., and 2 bbl. oil.

Pittsburgh & West Virginia Gas Co. 7803 Flossie Snodgrass, dry, through Injun sand, T.D. 2,285 ft.

Pittsburgh & West Virginia Gas Co. 7805 Ward Perrine, 63,910 cu. ft. gas, Injun sand T.D. 2,197 ft.

W. H. and L. E. Mossor 1 W. G. Perrine, 133,000 cu. ft. gas, Berea before shot, T.D. 2,582 ft.

Salt Lick district: Hope 8537 I. N. Brown, 48,784 cu. ft. gas, Gordon stray sand, T.D. 2,763 ft.

Cabell County

Grant district Monickle Gas Co. 1 John Heller, 11,880 cu. ft. gas, Big lime 1,628-1,795 ft., Big Injun 1,846-1,950 ft., Berea 2,394-2,406 ft., T.D. 2,409 ft., plugged and abandoned.

Calhoun County

Center district: Hope 8536 Lottie McEndree, 700,000 cu. ft. gas, sand 915 ft., Big Injun 1,880-1,930 ft., gas 957-59 ft., 977-79 ft., 1,020-80 ft., 1,035-1,145 ft., and 1,893-1,928 ft., T.D. 1,957 ft.

Sherman district: McCall Drilling Co. 1 D. W. Jacobs, 53,000 cu. ft. gas, Big Injun sand 2,210-86 ft., gas 2,245-86 ft., T.D. 3,214 ft.

Clay County

Henry district: Virginian Gasoline & Oil Corp. VI296 Brown & Goshorn, 5 bbl., Injun sand, T.D. 1,916 ft.

Lincoln County

Washington district: United Carbon Co. 3 Lincoln Mineral Co., 800,000 cu. ft. gas, Big lime 1,486-1,680 ft., Big Injun 1,680-1,732 ft., Berea 2,152-70 ft., brown shale 3,330-3,835 ft., shot 6,450 lb. gelatin, T.D. 3,839 ft.

Putnam County

Curry district: Dennis M. Roy et al 1 T. J. Womack, 119,000 cu. ft. gas, Big lime 1,476-1,656 ft., Injun 1,680-1,721 ft., Berea 2,192-2,218 ft., brown shale 3,350-3,752 ft., shot 3,352-3,752 ft., 4,500 lb. gelatin, T.D. 3,752 ft.

Reishman Oil & Gas Co. 2 W. C. May, 174,000 cu. ft. gas, Big lime 1,322-1,480 ft., Injun 1,507-64 ft., Berea 1,995-2,064 ft., brown shale 3,170-3,561 ft., shot 3,150 lb. gelatin, T.D. 3,575 ft.

Ritchie County

Grant district: H. L. McGinnis 4 A. Rutherford, drilled deeper from Salt sand, 2 bbl., Injun sand, T.D. 1,770 ft.

R. W. Richards et al 3 R. W. Richards, dry, Squaw sand, T.D. 1,948 ft.

Union district: Hope 6062 Little Kanawha Log & Tie Co., drilled deeper, 100,000 cu. ft. gas, Injun sand, T.D. 1,977 ft.

Wayne County

Lincoln district: Owens, Libby-Owens 29 Wilson Coal Land Co., 129,000 cu. ft. gas, brown shale, T.D. 3,002 ft.

Wood County

Williams district: H. P. Uhl 8 Addie L. Reynolds, 3 bbl., first Cow Run sand, T.D. 626 ft.

ORISKANY GAS FIELDS

DRILLING

Poca district: Godfrey L. Cabot, Inc., 6 D. Holmes Morton, top Corniferous lime 4,959 ft.

Columbian Carbon Co. 1 A. J. Wilkinson, top Corniferous 4,711 ft.

Columbian Carbon Co. 1 L. D. Wickline, top Corniferous 4,892 ft.

South Penn Natural Gas Co. 1 Ray-Salyers unit, top Corniferous 4,861 ft., top Oriskany 4,982 ft., gas 4,999-5,012 ft., T.D. 5,053 ft., gaged before shot 75,000 cu. ft., after shot 134,000 cu. ft. gas, waiting on orders, no completion.

SOUTHWEST PENNSYLVANIA

In Beaver County the wildcat of L. D. McMichaels et al recovered the tools in the Onondaga lime after fishing for 3 weeks and cleaning out to bottom at 5,434 ft. on the Elmer Pflug farm in New Sewickley Township. After repairing the damage, drilling has just resumed. In Center Township Saint Joseph Lead Co. is still in trouble with the test on the J. P. Koehler heirs farm. After cementing in three strings of tools, and drilling by, another gas pocket blew the tools up and resulted in another fishing job.

On Laurel Ridge in Stewart Township, Fayette County, New Penn Development Co. et al are drilling at 8,315 ft. in the wildcat on the Gregg L. Neel farm. At about 8,309 ft., the chert showed some particles of sand but not a definite part of the Oriskany formation. In Maryland these operators reached 5,570 ft. in the test on the Humberson farm on the Accident dome in Garrett County and reentered the old hole. The hole was then cemented back to 5,550 ft. to straighten the junction and if the tools move ahead an attempt may be made to run pipe.

On Chestnut Ridge in South Union Township, Fayette County, Peoples Natural Gas Co. is drilling 4 Piedmont Coal Co. at 5,645 ft. and No. 5 at 3,630 ft. Greensboro Gas Co. is down 540 ft. in the test on the Barton lease. New Penn Development Co., William E. Snee et al are drilling 1 Kirby at 561 ft. and 1 Carothers at 1,234 ft. and here are delayed with a bad hole. In North Union Township these operators have started deepening 1 Piedmont Coal Co. from 16 ft. in the Oriskany sand.

Armstrong County

Burrell Township: T. W. Phillips 3 S. Wagley, 60,000 cu. ft. gas, Bradford sand, T.D. 3,456 ft.

Kiskiminitas Township: Shaw & Townsend 1 Whitlinger heirs, 142,900 cu. ft. gas Bradford sand, T.D. 3,472 ft.

Monor Township: Local Co. 1 Claude Wray, 73,000 cu. ft. gas, Murraysville sand, T.D. 3,357 ft.

Plum Creek Township: Shelocta 2 J. E. Keller, 192,000 cu. ft. gas, Thirty Foot sand, T.D. 1,548 ft.

Clarion County

Porter Township: Frank Knight 2 Stanley Bowersox 22,000 cu. ft. gas, Speechley and Tiona sands, T.D. 3,071 ft.

Fayette County

German Township Fike and Spangy 1 H. L. Huston. dry, gas sand, T.D. 880 ft.

Greene County

Cumberland Township: Equitable Gas Co. 1 T. J. Strosnider, dry, T.D. 3,133 ft.

Whiteley Township: H. D. Freeland et al 1 Morris D. Fox, 10,000 cu. ft. gas, Bayard stray sand 3,118-34 ft., gas 3,119 ft., T.D. 3,216 ft.

Washington County

Cross Creek Township John Johnson & Co. 1 S. S. Dunbar, 420,000 cu. ft. gas, Fourth sand, R.P. 125 lb., T.D. 2,151 ft.

Somerset Township: Equitable 2 Jerry Myers, 82,000 cu. ft. gas after shot, Gordon sand, T.D. 3,062 ft.

Rocky Mountain Area

(Continued from Page 86)

Texas 2 Jones, C SW SE 6-33n-5w, drilling in at 2,868 ft., 75 ft. oil in hole.

Glacier Prod. 7 Bonnet, CSL SE NW 4-32n-5w, rigging up first report.

Hill County: A. B. Cobb 1 Government, SE SE NE 19-27n-15e, T.D. 4,341 ft., cemented 65 ft. 5½-in. liner with packer at 4,013 ft.

Edwards & Callison 1 Hansen, SW SE NW 25-33n-15e, drilling 1,957 ft.

Liberty County: Montana-Dakota Utilities 1 Oswood. C NE SW 18-35n-4e, coring 2,125 ft.

Western Natural Gas 1 Herbert, 28-37n-4e, cemented 7-in. at 1,643 ft.

Teton County: R. C. Tarrant 1 Kellogg, SW NW NE 33-27n-5w, S.D. 2,580 ft.

Toole County: Huso Brothers 2 Ellingson, C SE SE 14-35n-3w, drilled into water at 1,806 ft., will P.B. to 1,780 ft. and test.

Superior Pet. 1-A Government, SE SE NW 24-35n-3w, drilling 380 ft.

Silver Oils, Ltd., 4 Haskins, SE NE NE 25-36n-2w, drilling 1,300 ft.

Lund & Engleking 1 State, NE NE NE 34-35n-4w, T.D. 2,066 ft., break at 2,058-60 ft., show oil and water, will acidize.

Dakota-Montana Oil 3-A Government, NE SW SW 31-35n-1w, spudded.

Big West 7 Ellingson, CEL SE SW 14-35n-3w, drilling 1,400 ft., 8¼-in. at 1,010 ft.

J. H. Agen 17 Goeddertz, SE SE NW 23-35n-3w, drilling 380 ft.

Bosworth & Shubat 1 Lukenbill, C SW NE 11-36n-2w, T.D. 1,260 ft., 1,100 ft. water in sand at 1,235-50 ft., reaming 8¼-in. to bottom.

Montana-Dakota Utilities 323 Johnson, NW NW NW 35-34n-1w, drilling 370 ft., first report.

M. F. Toles 12 Norum, SW SE SW 33-35n-2w, drilling 240 ft., 10-in. at 60 ft., first report.

NORTHWEST NEW MEXICO COMPLETIONS

Fulcher Basin, San Juan County: Southern Union 4 Government, C NE SW 12-29n-12w, 2,500,000 cu. ft. of gas from Picture Cliff, T.D. 2,025 ft.

NORTHWEST NEW MEXICO DRILLING REPORT

San Miguel County: Southwest Drilling 1 Conchas, NW NE 34-17n-21e, drilling 2,925 ft.

Torrance County: Cardinal Oil 1 State, SE SW 3-8n-14e, drilling 390 ft. in Glorietta formation.

Orville J. Lee 1 Milburn, C NW SW 36-7n-7e, T.D. 1,767 ft., est. 250,000 cu. ft. from sand topped at 1,725 ft., will run 7-in.

Valencia County: F. V. Clifford 1 Nicolas Duran, C SE SE 5-6n-1e, building rotary rig, first report.

North and South Outposts Seeking to Extend Tinsley

By GEORGE WEBER

JACKSON, Miss., July 14. — Outpost tests in the Tinsley area attracted attention last week as field drilling continued strong in Mississippi's sole major oil field. Continuing the southward trend resumed last week when E. C. Johnston completed 1 J. O. Martin, a ¾-mile south extension, the W. G. Ray Drilling Co. has staked 1 Walker, SE NW 2-9-3, about ⅝ mile west of the Johnston well. Success of this test will result in considerable new drilling on the south edge of the field. The southeast trend was halted by failures several weeks ago, and the present area under development extends south and west of the newly opened southeast Tinsley sector.

The second north outpost well was staked last week when Slick-Urschel Oil Co. announced 1 F. A. McGraw, SW NW 25-11-3, about 1¼ miles north of present production limits in the field. K. Hughes et al are drilling below surface casing in the 1 G. C. Woodruff, located 2½ miles north of production in NE SE 19-11-2.

New locations continue to exceed completions with drilling carried on mostly on inside tracts of less than 40 acres. No indication of a lessening of this close drilling is yet seen, but such practices are not expected to continue indefinitely in view of the government request for wider spacing to conserve steel for pipe-line materials.

Sharkey Wildcat to Test Selma Again

British American Oil Producing Co. drilled 1-A Houston estate to a total depth of 4,023 ft. last week and has plugged back to test again the show of oil in the top of the Selma formation at 3,278 ft. Previous tests failed to shut off water, although some oil was produced. The present total depth is believed to have taken the well possibly into igneous formation, although that is not confirmed.

Deep wildcats in southern Mississippi and Alabama are being watched. In Stone County, Mississippi, Danciger Oil & Refining Co. are coring below 7,197 ft. having topped the Tuscaloosa formation at 7,102 ft. In Clarke County, Alabama, Union Producing Co. is below 6,487 ft. in 1 Waite, scheduled to go 12,000 ft.

SUMMARY OF COMPLETIONS

	No.	Bbl.	Footage
Oil wells: Tinsley ...	7	3,616	35,986

MISSISSIPPI COMPLETIONS

Tinsley, Yazoo County: Amerada Pet. Corp. 2 Tom Stutts, N½ SE NE 36-10-3, 1,224 bbl., 1-in. choke, C.P. 105 lb., T.P. 25 lb., 5½-in. casing 5,069 ft., perf. 4,964-92 and 5,002-26 ft., Woodruff zone.

Hassie Hunt 3 Sorrell, NE SE NE 31-10-2, 336 bbl., 20/64-in. choke, T.P. 65 lb., T.D. 5,150 ft., 5½-in. casing 5,138 ft., perf. 5,001-41 ft.

Hassie Hunt 2 G. C. Woodruff, SE NW 7-10-2, pumped 240 bbl., T.D. 5,602 ft., 7-in. casing 5,591 ft., perf. 5,357-73 ft., Perry sand.

E. C. Johnston 1 J. O. Martin, NW NW 1-9-3, 483 bbl., 2½-in. open tubing, T.D. 4,847 ft., 7-in. casing 4,834 ft., Woodruff zone.

W. B. Johnson Drlg. Co. 2 Tom Stutts, NW SW 31-10-2, 768 bbl., 2½-in. open tubing, T.D. 5,085 ft., 5½-in. casing 5,069 ft., perf. 4,966-5,037 ft., Woodruff zone.

Plains Prod. Co. 4 Milner, NE NW SW 7-10-2, pumped 400 bbl., T.D. 4,908 ft., 5½-in. casing 4,905 ft., perf. 4,830-40 ft., Woodruff zone.

Union Prod. Co. 20 Jennie Stevens, NE NE SE 12-10-3w, pumped 165 bbl., T.D. 5,328 ft., 7-in. casing 5,317 ft., Perry sand.

MISSISSIPPI WILDCAT REPORT

Chickasaw County: Century Oil Co. 1-A Flaherty, S½ SW SW 8-13s-3e, fishing, T.D. 2,340 ft.

Grenada County: Grenada Drlg. & Dev. Co. 1 Connecticut General Life Ins. Co., NW SE 28-23n-5e, S.D. 3,735 ft.

Kemper County: D. C. Williams et al 1 McKelvain, SE NE 2-9n-17e, S.D. 1,700 ft.

Leake County: Sinclair-Wyoming Oil Co. 1 Pearl River, NW SE NW 28-9n-6e, T.D. 7,634 ft., fishing.

Montgomery County: Henderson Oil Co. 1 School Land, SE NE NW 16-19n-6e, S.D. 3,720 ft.

Sharkey County: British American Oil Prod. Co. 1-A Houston Est., NW NE SW 23-11-7w, T.D. 4,023 ft., P.B. to test show in chalk.

Stone County: Danciger Oil & Ref. Co. 1 Stone County, SE SW 16-2s-11w, coring 7,197 ft.

Claiborne County: Slick-Urschel Oil Co. 1 F. A. McGraw, SW NW 25-11-3.

ALABAMA WILDCATS

Clarke County: Union Producing Co. 1 M. M. Waite, C NW 27-8n-1w, drilling 6,487 ft.

Franklin County: E. O. Heath, Jr., 1 W. O. Hester, SW SW 4-6s-12w, drilling chert 907 ft.

Lauderdale County: G. F. Mercer 1 Patterson, NW SE 8-2s-12w, drilling chert 102 ft.

Fayette County: J. W. Mills 1 W. C. Musgrove, C NW 10-15s-12w.

FLORIDA WILDCATS

Dade County: Wm. G. Blanchard et al 1 Everglades, SW SW SW 31-53s-35e, T.D. 1,440 ft., preparing to set 12-in. 475 ft. to shut off water flow.

Wm. G. Blanchard 2 Everglades, SW SW 31-53s-35e, flowing water between 6⅝-in. and 10-in. casing strings, squeezed 1,200-10 ft.

GEORGIA COMPLETIONS

Wildcat, Clinch County: Georgia Resources, Inc., 1 Gillican, C Land Lot 200, 12th Land Dist., T.D. 1,501 ft., dry.

LEGAL

Department of the Interior. Call for Bids. To purchase royalty oil accruing to the United States from the Salt Creek oil field, Wyoming. Sealed proposals, in duplicate, will be received in the office of the Secretary of the Interior, Washington, D. C., on or before noon, July 21, 1941, from responsible bidders for the purchase, beginning August 1, 1941, of the light royalty oil accruing to the United States under leases subject to the unit agreement for the Salt Creek oil field, Wyoming. Detailed information on quantities offered for sale, required form of bids, deliveries, volume measurements, gravity determinations, bond requirements, and action on bids, should be obtained by prospective bidders from the Director, Geological Survey, Department of the Interior, Washington, D. C., the Supervisor, U. S. Geological Survey, Casper, Wyoming, or the Register, U. S. Land Office, Cheyenne, Wyoming. Sealed bids are to be submitted to the Secretary of the Interior, Washington, D. C., pursuant to the specifications, the envelope to be marked plainly "Bid on Salt Creek royalty oil. Not to be opened before noon, July 21, 1941." No bid received after the time fixed herein for submitting bids will be considered. Secretary of the Interior.

Canadian Fields

(Continued from Page 72)

New Tests Starting

NORTH TURNER VALLEY.—Royalite Oil 60, LSD 5, 14-20-3w5, rigging.

Royalite Oil 58, LSD 7, 22-20-3w5, spudded and below 660 ft.

Southwest Extension of Field

Completion of Northwest-Hudson's Bay 5, LSD 10, 8-18-2w5, as a large producer with allowable of 360 bbl. daily may lead to new activity in the south end of the field. Farther east, faulting was found in the most southerly wells, but systematic testing of a possible southwest extension of production has been continued by Northwest-Hudson's Bay interests. Northwest 5, which still farther extends the producing area, is not merely the largest well of the group, but proved shallower than expected. Northwest 6 is now drilling ¼ mile south, and Brown Oil Corp. 6, approximately ½ mile farther south, abandoned a couple of years ago, may be deepened.

Outside Fields

CLEARWATER.—Clear Oils 1, LSD 8, 2-35-10w5, 3,007 ft., cleaning out and deepening.

PINCHER CREEK.—Weymarn Petroleums 2, LSD 5, 7-6-1w5, fishing at 6,430 ft., bailing light crude.

BLOOD INDIAN RESERVE.—Northwest-Treaty 1, LSD 4, 17-8-23w4, below 4,652 ft.

KEHO DOME.—Keho Dome Oils 1, LSD 3, 18-11-22w4, rigging.

LETHBRIDGE. — Lethbridge Petroleums 1, LSD 12, 11-8-22w4, T.D. 4,151 ft., acidizing and testing in Madison.

TWIN RIVER: Western Drilling Co. 1, LSD 16, 3-2-20w4, below 850 ft.

STEVEVILLE. — Standard of British Columbia 3 Princess, LSD 5, 13-20-12w4, T.D. 3,260 ft., flowing 70 to 90 bbl. daily with some water.

Standard 2 Princess, LSD 3, 13-20-12w4, P.B. 3,335 ft., perforating and testing in lime.

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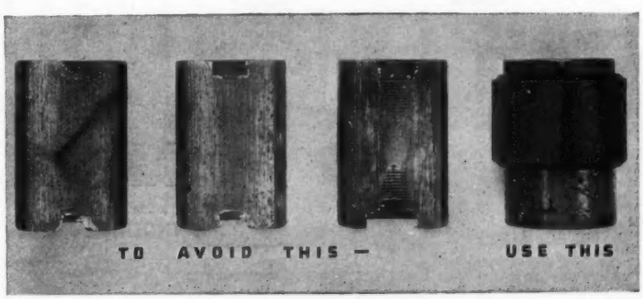

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PATTERSON-BALLAGH TUBING PROTECTORS

Summary of Operations, All Fields for June

SUMMARY OF COMPLETIONS

District—	Comp.	Oil	Prod.	Gas	Dry	Completions Under 1,000 ft.	1,000-2,500 ft.	2,500-5,000 ft.	5,000-10,000 ft.	Over 10,000 ft.	Footage	Drilling
Appalachian	553	465	593	71	17	5	515	26	7	0	939,850	715
Ohio	153	47	976	60	46	45	45	62	1	0	318,834	237
E. Kentucky	28	9	76	15	4	2	10	16	0	0	58,306	81
W. Kentucky	33	17	738	14	2	17	16	0	0	0	31,497	51
Michigan	60	23	3,701	5	32	1	45	14	0	0	117,582	137
Indiana	35	13	2,358	4	18	10	9	16	0	0	69,638	92
Illinois	297	228	47,622	0	69	20	134	144	0	0	709,791	351
Kansas	176	139	154,499	1	36	1	20	155	0	0	607,396	294
Nebraska	8	2	2,620	0	6	1	3	4	0	0	19,481	21
Missouri	0	0	0	0	0	0	0	0	0	0		6
Oklahoma	143	91	17,592	9	43	14	53	55	19	0	414,183	326
North Texas	176	117	19,042	1	58	46	67	54	9	0	385,884	212
W. Central Texas	32	12	862	3	17	8	15	7	2	0	66,277	59
N. West Texas	92	91	73,649	0	1	0	5	27	60	0	463,619	139
S. West Texas	86	80	57,267	1	5	4	20	58	3	1	293,180	152
Texas Panhandle	41	40	7,645	1	0	0	1	40	0	0	126,294	96
East Texas	87	63	7,967	2	22	1	6	63	17	0	353,446	97
E. Texas Border	1	0	0	0	1	0	0	1	0	0	4,314	9
Upper Gulf Coast	96	76	17,461	2	18	2	4	9	76	5	591,184	125
Lower Gulf Coast	58	36	5,785	2	20	1	0	13	44	0	340,054	99
S. Central Texas	17	11	980	1	5	5	7	5	0	0	34,391	49
South Texas	65	37	3,988	5	23	2	16	44	3	0	200,488	70
Southeast New Mexico	15	12	2,870	0	3	1	2	11	1	0	52,968	108
Arkansas	33	20	2,570	1	12	2	8	16	7	0	131,386	23
North Louisiana	66	40	3,857	10	16	3	37	19	7	0	182,062	70
Louisiana Gulf	97	65	16,188	1	31	1	3	8	61	24	769,366	145
Mississippi	27	21	15,211	0	6	2	2	16	7	0	120,321	23
Alabama	2	0	0	0	2	2	0	0	0	0	870	3
Montana	21	7	413	8	6	3	13	5	0	0	38,217	71
Wyoming	8	7	2,068	0	1	1	3	2	2	0	22,589	81
Colorado	2	2	246	0	0	0	1	1	0	0	3,601	38
Utah	0	0	0	0	0	0	0	0	0	0	.....	13
N.W. New Mexico	0	0	0	0	0	0	0	0	0	0		8
California	117	100	71,660	4	13	2	17	48	44	6	613,810	177
Total June	2,625	1,871	540,504	221	533	202	1,077	940	370	36	8,080,879	4,178
Total May	2,669	1,879	533,479	236	554	208	1,134	990	299	38	7,797,117	4,030
Difference	44	8	17,025	15	21	6	57	50	71	2	293,762	148

APPALACHIAN

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Bradford	330	*330	358	0	0	291
Allegany	112	†112	117	0	0	79
N. Oriskany	1	0	0	‡1	0	14
Middle dist.	14	§8	6	¶6	0	14
Butler-Armstrong	7	2	4	‖3	2	14
S. W. Penna.	25	2	10	18	6	77
W. Virginia	64	12	98	43	9	226
Tt. June	553	465	593	71	17	715
Ttl. May	561	456	643	87	18	594
Difference	8	9	50	16	1	121

*Includes 172 water-input wells.
†Includes 58 water-input wells.
‡49,000 cu. ft. gas.
§Includes 1 water-input well.
¶290,000 cu. ft. gas.
‖419,000 cu. ft. gas.

OHIO

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Ashland	8	1	5	2	5	15
Athens	12	5	28	4	3	19
Belmont	2	0	0	1	1	2
Coshocton	2	0	0	1	1	4
Cuyahoga	4	0	0	4	0	5
Guernsey	2	0	0	1	1	6
Hocking	2	1	25	0	1	5
Holmes	2	0	0	2	0	5
Knox	4	0	0	0	4	13
Lawrence	2	0	0	2	0	5
Licking	22	7	124	11	4	22
Lorain	4	0	0	2	2	5
Medina	12	8	83	3	1	16
Meigs	5	0	0	3	2	8
Monroe	3	0	0	2	1	7
Morgan	6	0	0	2	4	5
Muskingum	11	1	41	7	3	15
Noble	10	5	13	2	3	11
Perry	6	6	613	0	0	14
Tuscarawas	3	0	0	2	1	10
Washington	12	7	18	3	2	16
Wayne	6	0	0	3	3	10
Wood	2	1	10	0	1	1
Miscellaneous	11	5	16	3	3	18
Ttl. June	153	47	976	60	46	237
Ttl. May	144	26	637	61	57	241
Difference	9	21	330	1	11	4

Gas, 63.7 million cu. ft. Recompletions, 1 oil. Input wells, 20 (9,758 ft.).

EASTERN KENTUCKY

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Magoffin	0	0	0	0	0	1
Lee	1	1	5	0	0	4
Martin	1	1	1	0	0	4
Johnson	0	0	0	0	0	4
Menifee	1	1	10	0	0	0
Knott	4	0	0	0	4	16
Wolfe	1	1	5	0	0	0
Knox	3	0	0	0	3	2
Morgan	1	0	0	1	0	0
Floyd	5	0	0	0	5	21
Powell	6	5	55	1	0	0
Pike	4	0	0	1	3	29
Laurel	1	0	0	1	0	0
Ttl. June	28	9	76	5	15	81
Ttl. May	20	1	50	2	17	61
Difference	8	8	26	2	2	20

Production from above gas wells, combined, 15 million cu. ft.

WESTERN KENTUCKY

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Daviess	10	7	389	2	1	13
Grayson	1	0	0	1	0	0
Hancock	2	1	10	1	0	3
Henderson	8	6	162	2	0	4
McLean	4	2	167	2	0	8
Ohio	8	1	10	6	1	10
Miscellaneous	0	0	0	0	0	13
Ttl. June	33	17	738	14	2	51
Ttl. May	27	12	250	13	2	47
Difference	6	5	488	1	0	4

MICHIGAN

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Allegan	14	8	189	0	6	19
Alpena	1	0	0	0	1	1
Arenac	1	1	64	0	0	11
Bay	2	2	68	0	0	7
Calhoun	1	0	0	0	1	0
Cass	1	0	0	0	1	2
Clare	8	3	831	1	4	13
Huron	1	0	0	0	1	2
Isabella	3	0	0	2	1	5
Kent	1	0	0	0	1	5
Mecosta	1	0	0	0	1	1
Midland	1	1	180	0	0	1
Missaukee	1	0	0	1	0	2
Monroe	2	1	40	0	1	3
Montcalm	1	0	0	0	1	4
Newaygo	1	0	0	0	1	0
Osceola	3	1	1,980	1	1	8
Ottawa	8	4	156	0	4	9
Saginaw	1	0	0	0	1	0
Van Buren	8	2	193	0	6	11
Miscellaneous	0	0	0	0	0	33
Ttl. June	60	23	3,701	5	32	137
Ttl. May	64	22	4,416	5	37	125
Difference	4	1	715	0	5	12

INDIANA

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Birdseye	1	0	0	0	1	0
Burkin	1	1	60	0	0	0
Cannelburg	1	0	0	0	1	0
E. Calvin	1	1	760	0	0	8
Griffin and S.	9	9	1,470	0	0	27
Hudsonville	1	0	0	1	0	0
Merom & Raley	1	0	0	0	1	1
Point	1	0	0	0	1	0
Trenton	1	0	0	1	0	0
Troy	2	1	3	0	1	2
Wildcats	16	1	65	2	13	40
Miscellaneous	0	0	0	0	0	11
Ttl. June	35	13	2,358	4	18	92
Ttl .May	40	23	2,599	1	16	78
Difference	5	10	241	3	2	14

ILLINOIS

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Albion	2	2	517	0	0	0
Allendale	8	3	185	0	5	6
Bartelso	1	1	5	0	0	0
Benton	42	41	11,419	0	1	32
Boos & N.	4	3	1,204	0	1	0
Boyleston	1	1	10	0	0	0
Bridgeport	1	1	28	0	0	0
Centralia	1	1	31	0	0	0
Clay City	1	1	49	0	0	3
Dahlgren	13	11	4,432	0	2	12
Dale	6	5	2,315	0	1	11
Dundas	4	3	1,902	0	1	5
Dupo	3	3	154	0	0	3
E. Calvin	15	15	1,373	0	0	13
Enterprise, N. and W.	12	12	2,144	0	0	12
Flora, E.	1	1	125	0	0	0
Hardinville	1	1	15	0	0	0
Hoodville	5	4	561	0	1	3
Inman	6	6	1,268	0	0	11
Iola	1	1	15	0	0	1
Irvington	2	2	318	0	0	2
Keensburg	1	1	38	0	0	0
Louden	13	13	1,523	0	0	19
Maunie	1	1	157	0	0	4
Mill Shoals	2	1	150	0	1	0
Mt. Carmel	12	10	1,285	0	2	6
Noble	1	1	26	0	0	0
New Haven	3	3	257	0	0	2
New Harmony and N. & S.	27	27	5,415	0	0	29
Patoka and E.	12	11	2,131	0	1	5
Raymond	1	1	0	0	0	0
Roland	9	8	1,627	0	1	7
Russellville	2	0	0	0	2	0
Sailor Springs	1	1	262	0	0	3
St. James	1	1	41	0	0	1
Salem	2	2	367	0	0	11
S. Griffin	1	1	300	0	0	0
Springerton	1	1	35	0	0	1
Storms	1	0	0	0	1	2
Tonti	3	3	195	0	0	0
W. Irons	6	6	498	0	0	2
W. Liberty	10	9	3,651	0	1	6
Wildcat	57	9	1,594	0	48	98
Miscellaneous	0	0	0	0	0	41
Ttl June	297	228	47,622	0	69	351
Ttl. May	266	197	49,932	1	68	363
Difference	31	31	2,310	1	1	12

NEBRASKA

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Falls City	2	2	2,620	0	0	2
Shubert	0	0	0	0	0	7
Wildcats	6	0	0	0	6	12
Ttl. June	8	2	2,620	0	6	21
Ttl. May	13	6	1,878	0	7	21
Difference	5	4	742	0	1	0

KANSAS

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Ainsworth	2	2	595	0	0	1
Augusta	1	0	0	0	1	3
Beaver	2	1	47	0	1	1
Bedford	3	3	3,107	0	0	1
Bemis	2	2	3,235	0	0	3
Big Creek & S.	8	8	5,724	0	0	7
Bloomer	1	1	33	0	0	2
Bornholdt	1	1	3,000	0	0	0
Bowman	1	1	45	0	0	2
Brandt	2	1	740	0	1	0
Breford	5	2	5,951	0	3	1
Brinegar	1	0	0	0	1	0
Burnett	5	5	15,000	0	0	14
Campbell	1	1	389	0	0	0
Catherine & S.W.	1	1	96	0	0	1
Chase	1	1	103	0	0	3
Coralena	8	8	6,786	0	0	10
Cunningham	2	2	924	0	0	1
Donovan	1	1	625	0	0	0
Doran	1	1	109	0	0	0
Drach	1	1	101	0	0	0
Dubuque	1	1	459	0	0	0
Eberhardt	1	1	2,864	0	0	3
El Dorado	0	0	0	0	0	6
Emmeran	1	0	0	0	1	1
Fairfield	1	1	20	0	0	0
Fairport	1	1	115	0	0	1
Frog Hollow	1	1	524	0	0	3
Geneseo	1	1	51	0	0	1
Gibson	1	0	0	0	1	1
Goodrich	1	1	354	0	0	0
Gorham	1	0	0	0	1	0
Graber	1	1	180	0	0	1
Greenvale & W.	4	4	6,394	0	0	6
Hall-Gurney	15	15	20,244	0	0	13
Keesling	4	3	544	0	1	0
Keighly	1	1	297	0	0	0
Kipp	1	1	3,000	0	0	1
Koblitz	1	1	55	0	0	3
Kraft	1	0	0	0	1	6
Krier	3	3	379	0	0	2
Lanterman	2	2	6,000	0	0	1
Laton	5	5	631	0	0	13
Lost Springs	4	4	644	0	0	8
Macksville	1	0	0	0	1	0
Marshall	1	1	75	0	0	1
Max	1	1	3,000	0	0	2
McLouth	0	0	0	0	0	7
McPherson	1	0	0	0	1	0
Orth	1	1	47	0	0	0
Pawnee Rock	2	2	3,465	0	0	4
Potwin	1	0	0	0	1	0
Prusa & N.	2	2	3,066	0	0	3
Ray	2	2	5,593	0	0	3
Raymond	1	1	61	0	0	1
Roxbury	2	2	2,777	0	0	2
Shaffer	1	1	3,000	0	0	1
Silica dist.	3	2	1,157	0	1	5
Sperling	1	1	217	0	0	0
St. John	1	1	3,000	0	0	0
Stafford	1	1	3,000	0	0	4
Stoltenberg	3	3	5,018	0	0	5
Straub	1	1	123	0	0	0
Trapp & W.	9	9	14,611	0	0	12
Voshell	1	1	66	0	0	1
Whelan	1	1	842	0	0	1
Wilkins	4	4	3,777	0	0	3
Zenith	11	11	12,206	0	0	7
Misc.	0	0	0	0	0	72
Wildcats	22	1	15	1	20	43
Ttl. June	176	139	154,499	1	36	294
Ttl. May	222	156	165,168	7	59	279
Difference	46	17	10,669	6	23	15

OKLAHOMA

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Alsuma	1	0	0	1	0	0
Avoca	1	1	315	0	0	1
Bald Hill	2	2	7	0	0	0
W. Barnsdall	2	2	311	0	0	0
N. Beggs	1	0	0	0	1	0
Big Horse	1	0	0	0	1	0
N. Bristow	1	1	35	0	0	3
Broken Arrow	1	0	0	0	1	0
Burbank	1	1	100	0	0	0
Calvin	1	1	35	0	0	0
Castle	1	1	250	0	0	0
Cement	2	2	409	0	0	0
Centrahoma	2	0	0	2	0	0
Chickasha	2	0	0	2	0	3
Cleveland	1	0	0	0	1	0
Cromwell & East	1	1	25	0	0	3
Cumberland	1	1	112	0	0	9
Dill	4	4	522	0	0	5
Dilworth	1	1	13	0	0	2
Dora	1	0	0	1	0	0
W. Doyle	1	1	45	0	0	1
N. Duncan	1	0	0	0	1	0
Earlsboro district	0	0	0	0	0	6
Fish	6	3	655	0	3	1
West Fish	1	0	0	0	1	0
Forty-Five	1	1	33	0	0	0
W. Frederick	1	1	2,786	0	0	3
Glenn pool	2	2	28	0	0	0
Guthrie	0	0	0	0	0	13
Gypsy Hill	1	1	12	0	0	0
Healdton	1	1	12	0	0	1
Hewitt	1	1	39	0	0	0
W. Hewitt	15	11	4,964	0	4	13
Hickory Creek & S.	4	4	212	0	0	0
Hobart	2	2	149	0	0	6
S. Hominy	1	1	20	0	0	0
Keokuk	1	0	0	0	1	0
S. Konawa	0	0	0	0	0	5
Langston	1	1	50	0	0	0
Lawton	1	0	0	0	1	1
East Little River	1	0	0	0	1	0
Mannford	1	1	10	0	0	0
Marietta	1	0	0	0	1	0
Maude & S.	2	2	607	0	0	0
Noble	1	1	215	0	0	0
North McCracken	1	0	0	0	1	0
Norris (gas)	1	0	0	1	0	0
S. Nuyaka	1	0	0	0	1	0
Oakman	1	1	4	0	0	3
Okemah, N. & E.	2	2	130	0	0	2
Oklahoma City	3	3	1,920	0	0	11
Okmulgee	1	1	14	0	0	0
Pearsonia	1	1	300	0	0	0
Ramsey	1	1	178	0	0	0
Red Fork	1	1	1	0	0	0
Sapulpa & S.	4	1	10	0	3	1
Seminole & E. & W.	2	2	181	0	0	3
Slick	1	1	37	0	0	0
St. Louis	6	4	1,290	0	2	6
N. St. Louis	3	3	837	0	0	0
E. Stroud	5	5	1,685	0	0	12
Tecumseh Lake	3	3	1,268	0	0	8
N. Terlton	1	1	40	0	0	0
N. Tibbens	1	1	40	0	0	0
Tiger Flats	1	0	0	1	0	0
Tussy	1	1	107	0	0	4
Velma	1	1	8	0	0	4
Weleetka & W.	2	2	140	0	0	1
E. Wewoka	1	1	200	0	0	0
Misc.	2	0	0	0	2	118
Wildcats	21	3	235	1	17	68
Ttl. June	143	91	17,592	9	43	326
Ttl. May	155	105	32,586	12	38	317
Difference	12	14	14,994	3	5	9

NORTH CENTRAL TEXAS

NORTH TEXAS

	Comp.	Oil	Prod.	Dry	Gas	Drg.
Antelope	3	3	1,600	0	0	6
Bryson	3	3	820	0	0	4
Fargo	4	3	1,165	0	1	5
Hott	1	1	165	0	0	1
Hull-Silk	12	11	2,557	0	1	16
K.M.A. and Deep	19	18	4,445	0	1	22
McCord-Housley	4	4	36	0	0	5
Mathis	1	1	200	0	0	1
Nocona	7	4	80	0	3	6
Olney	26	11	432	0	15	18
Rogers & Rogers	1	1	150	0	0	2
Ross	1	0	0	0	1	0
Seymour	2	1	94	0	1	2
Voth	13	10	566	0	3	11
Walnut Bend	2	2	300	0	0	4
Wildcats	15	3	2,087	1	11	41
Unlisted fields	0	0	0	0	0	15
Misc. fields:						
Archer	13	6	927	0	7	11
Clay	20	12	528	0	8	13
Cooke	3	2	57	0	1	3
Wichita	14	10	264	0	4	12
Wilbarger	6	6	600	0	0	5
Young	6	5	1,969	0	1	9
Subtotal	176	117	19,042	1	58	212

WEST CENTRAL TEXAS

Akard	1	1	156	0	0	1
Brownwood Gas	1	0	0	1	0	1
Bluff Creek	1	1	83	0	0	2
Cross Cut	1	1	5	0	0	1
Lewis	3	2	208	0	1	3
Novice	3	1	86	0	2	4
Nowles	1	1	18	0	0	1
Putnam	2	0	0	0	2	2
Royston	1	0	0	0	1	0
Sayles	1	1	102	0	0	2
Triplet	1	1	154	0	0	1
Wildcats	11	1	36	1	9	21
Unlisted fields	0	0	0	0	0	9
Misc. fields:						
Brown	1	0	0	1	0	3
Callahan	2	2	14	0	0	3
Shackelford	2	0	0	0	2	5
Subtotal	32	12	862	3	17	59
Ttl. June	208	129	19,904	4	75	271
Ttl. May	221	126	20,041	5	90	300
Difference	13	3	137	1	15	29

WEST TEXAS

SOUTHERN WEST TEXAS

Abell	1	1	1,104	0	0	9
Bean	1	0	0	0	1	1
Crockett	1	1	111	0	0	1
Cowden	1	1	433	0	0	1
Estes	5	5	5,641	0	0	5
Foster	8	8	3,798	0	0	7
Goldsmith and N.	6	6	6,256	0	0	11
Halley	1	1	1,100	0	0	1
Hutchins	2	2	1,136	0	0	2
Johnson	7	7	4,787	0	0	9
Jordan	1	1	495	0	0	3
Keystone	4	4	1,736	0	0	5
McCamey	3	3	685	0	0	4
McElroy	3	3	1,354	0	0	4
North Cowden	6	6	3,042	0	0	7
Noelke	6	6	9,740	0	0	6
Pecos Valley	1	1	297	0	0	3
Magnolia-Sealy	1	1	399	0	0	2
Shearer	1	1	2	0	0	1
Shipley-Deep	1	1	782	0	0	1
Taylor-Link	4	4	1,164	0	0	4
Tobarg	4	4	84	0	0	5
Tubb	2	2	1,938	0	0	4
Waddell	6	5	9,539	1	0	9
North Ward	4	4	1,501	0	0	5
White and Baker	4	2	143	0	2	6
Wildcats	2	0	0	0	2	17
Misc.	0	0	0	0	0	19
Subtotal	86	80	57,267	1	5	152

NORTHERN WEST TEXAS

Chalk	2	2	1,116	0	0	1
Dockery-Robbins	2	2	640	0	0	3
Means	1	1	203	0	0	1
Seminole	12	12	7,235	0	0	11
Sharon	4	4	862	0	0	5
Slaughter	43	43	42,897	0	0	65
Wasson	27	27	20,696	0	0	31
Wildcats	1	0	0	0	1	10
Misc.	0	0	0	0	0	12
Subtotal	92	91	73,649	0	1	139
Ttl. June	178	171	130,916	1	6	291
Ttl. May	175	165	122,235	0	10	314
Difference	3	6	8,681	1	4	23

TEXAS PANHANDLE

Carson	3	2	168	1	0	17
Gray	19	19	3,717	0	0	30
Hutchinson	18	18	3,402	0	0	34
Wheeler	1	1	358	0	0	6
Others	0	0	0	0	0	9
Ttl. June	41	40	7,645	1	0	96
Ttl. May	55	50	9,115	5	0	102
Difference	14	10	1,470	4	0	6

EASTERN TEXAS

E. Texas field (hrly. prod.): Longview	7	7	340	0	0	7
Kilgore	25	25	1,029	0	0	15
Joiner	5	5	77	0	0	4
Cayuga	1	0	0	1	0	2
Grapeland	1	0	0	1	0	3
Hawkins	17	17	4,695	0	0	16
Long Lake	2	2	204	0	0	4
Navarro Crossing	1	1	55	0	0	1
Talco	7	5	1,532	0	2	4
Techuacanna	1	0	0	0	1	1
Van	1	0	0	0	1	1
Wortham	1	1	35	0	0	2
Willow Springs	1	0	0	0	1	5
Wildcats	17	0	0	0	17	24
Miscellaneous	0	0	0	0	0	8
Ttl. June	87	63	7,967	2	22	97
Ttl. May	94	77	12,151	4	13	99
Difference	7	14	4,184	2	9	2

TEXAS GULF COAST

Anahuac	3	3	1,861	0	0	2
Bay City	1	0	0	0	1	1
Blessing	1	1	148	0	0	1
Big Creek	1	1	66	0	0	1
Boling	1	1	498	0	0	1
Blue Ridge	2	0	0	0	2	1
Chenango	1	1	150	0	0	1
Clodine	1	1	108	0	0	1
Danbury	1	0	0	0	1	1
Dyersdale	3	2	656	0	1	2
Esperson	2	2	1,429	0	0	4
Fishers Reef	1	1	168	0	0	0
Fannett	2	2	1,431	0	0	2
Fig Ridge	1	1	70	0	0	1
Garwood	1	1	315	0	0	1
Hastings	2	1	320	1	0	0
Lakeview	1	0	0	1	0	0
League City	1	0	0	0	1	2
Lolita	14	14	1,647	0	0	13
Lovells Lake	1	1	140	0	0	1
Manvel	1	1	544	0	0	1
Maurbro	3	3	1,387	0	0	4
N. Markham	1	1	156	0	0	1
Old Ocean	3	3	558	0	0	11
Pickett Ridge	2	2	165	0	0	0
Port Neches	1	1	125	0	0	2
Red Fish Reef	1	1	178	0	0	3
Saratoga	1	0	0	0	1	1
Segno	1	1	124	0	0	2
W. Silsbee	1	1	308	0	0	1
Turtle Bay	1	1	157	0	0	0
Thompson	2	2	264	0	0	0
Tomball	4	3	657	0	1	2
W. Ganado	2	2	207	0	0	2
W. Columbia	5	4	1,161	0	1	3
W. Ranch	13	12	2,012	0	1	10
Withers	3	3	285	0	0	3
Van Vleck	1	1	121	0	0	1
Vienna	1	1	45	0	0	0
Miscellaneous	8	0	0	0	8	42
Ttl. June	96	76	17,461	2	18	125
Ttl. May	85	68	12,737	3	14	135
Difference	11	8	4,724	1	4	10

EAST TEXAS BORDER

Smithland	0	0	0	0	0	3
Bethany	0	0	0	0	0	1
Wildcats	1	0	0	0	1	5
Ttl. June	1	0	0	0	1	9
Ttl. May	11	5	123	3	3	7
Difference	10	5	123	3	2	2

SAN ANTONIO DISTRICT

Alta Vista	1	1	41	0	0	1
Bee Creek	1	1	446	0	0	1
Chicon Lake	1	1	3	0	0	0
Elm Creek	1	1	3	0	0	2
Gas Ridge	3	2	2	0	1	2
La Coste	1	0	0	1	0	0
Somerset	1	1	2	0	0	1
Tenney Creek	5	4	483	0	1	3
Miscellaneous	3	0	0	0	3	39
Ttl. June	17	11	980	1	5	49
Ttl. May	20	12	771	1	7	53
Difference	3	1	209	0	2	4

LAREDO DISTRICT

Boyle	2	1	70	1	0	1
Bridwell	1	1	48	0	0	0
Chiltipin	1	0	0	0	1	1
Chaparosa	1	0	0	1	0	0
Charamousca	1	1	38	0	0	1
Casa Blanca	4	3	141	1	0	2
Colomena	2	0	0	0	2	0
Colorado	7	7	1,015	0	0	3
Driscoll	2	2	363	0	0	1
Escobas	1	0	0	0	1	0
Glenn	1	0	0	1	0	0
Hoffman	1	1	80	0	0	3
Holbein	2	0	0	0	2	2
Kelsey	1	1	312	0	0	2
Killam	3	3	188	0	0	3
Manila	2	2	55	0	0	1
North Rincon	2	2	162	0	0	1
Rincon	11	8	945	1	2	13
Sam Fordyce	1	1	97	0	0	0
Sarnosa	1	0	0	0	1	3
Sun	3	3	439	0	0	3
Seven Sisters	1	0	0	0	1	0
White Creek	3	1	35	0	2	1
Miscellaneous	11	0	0	0	11	29
Ttl. June	65	37	3,988	5	23	70
Ttl. May	61	27	3,400	6	28	73
Difference	4	10	588	1	5	3

LOWER GULF COAST

Agua Dulce	5	4	971	0	1	11
Clara Driscoll	2	2	270	0	0	1
Coleto Creek	1	1	130	0	0	2
Cologne	1	0	0	1	0	0
East Telferner	1	0	0	0	1	0
East Mathis	1	0	0	0	1	0
Heyser	1	1	126	0	0	0
Jay Welder	1	0	0	0	1	1
La Gloria	2	2	530	0	0	2
Luby	1	1	81	0	0	1
La Rosa	2	0	0	0	2	0
McCampbell	1	0	0	0	1	2
Midway	5	4	327	1	0	7
Minnie Bock	3	3	177	0	0	4
Orange	2	2	258	0	0	1
Placedo	2	2	172	0	0	0
Richard King	3	3	233	0	0	2
Refugio	1	1	151	0	0	3
Robstown	1	0	0	0	1	0
Shield	2	2	328	0	0	2
Sandia	1	0	0	0	1	0
South Clara Driscoll	1	0	0	0	1	4
Stratton	3	3	284	0	0	6
St. Charles	1	1	153	0	0	0
Tom O'Connor	2	2	1,268	0	0	1
Wade City	2	2	326	0	0	1
Miscellaneous	10	0	0	0	10	50
Ttl. June	58	36	5,785	2	20	99
Ttl. May	37	29	4,422	2	6	102
Difference	21	7	1,363	0	14	3

ARKANSAS

Atlanta	2	2	336	0	0	0
Champagnolle	2	0	0	0	2	0
Dorcheat	2	2	480	0	0	4
East Schuler	1	1	132	0	0	0
El Dorado	3	2	204	0	1	1
Fouke	2	1	432	0	1	0
McKamie	1	0	†384	1	0	4
Mount Holly	1	0	0	0	1	0
Nick Springs	1	0	0	0	1	0
Smackover	3	3	105	0	0	3
Stephens	3	3	130	0	0	1
Troy	4	3	209	0	1	2
Urbana	3	3	158	0	0	1
Wildcats	5	0	0	0	5	7
Ttl. June	33	20	2,570	1	12	23
Ttl. May	9	6	1,193	0	3	34
Difference	24	14	1,377	1	9	11

*Gas production (million cu. ft.): Dorcheat, 2,320; McKamie, 3.072. †Condensate.

NORTH LOUISIANA

Ajax	0	0	0	0	0	3
Athens	1	0	0	0	1	0
Bellevue	0	0	0	0	0	3
Bethany	1	0	0	0	1	0
Bisteneau	1	0	0	1	0	1
Caddo	20	19	629	1	0	14
Cotton Valley	0	0	0	0	0	2
De Soto-Red River	1	0	0	0	1	0
Georgetown-Urania	1	0	0	0	1	3
Homer	0	0	0	0	0	1
Joaquin	0	0	0	0	0	1
Little Creek	4	4	594	0	0	4
Monroe	6	0	0	6	0	4
Nebo	5	4	815	0	1	3
Olla	12	10	1,169	0	2	6
Pleasant Hill	0	0	0	0	0	1
Sibley	1	0	0	1	0	0
Sligo	2	1	100	1	0	4
South Olla	0	0	0	0	0	4
Sugar Creek	1	1	190	0	0	2
Urania	1	0	0	0	1	1
Walters	1	1	360	0	0	1
Waskom	0	0	0	0	0	1
Wildcats	8	0	0	0	8	11
Ttl. June	66	40	3,857	10	16	70
Ttl. May	54	31	3,236	4	19	59
Difference	12	9	621	6	3	11

*Gas production (million cu. ft.): Bisteneau, 50; Caddo, 0.135; Monroe, 5.32; Sibley, 30; Sligo, 62.5.

LOUISIANA GULF COAST

Anse La Butte	7	4	851	0	3	10
Bateman Lake	1	0	0	1	0	0
Barataria	4	3	870	0	1	3
Bayou Blue	1	0	0	0	1	3
Bayou Boullion	1	0	0	0	1	0
Bayou de Allemands	1	1	227	0	0	0
Bayou Pigeon	1	1	308	0	0	2
Bayou Sale	1	1	216	0	0	0
Bay St. Elaine	1	1	162	0	0	1
Chacahoula	1	0	0	0	1	2
Chalkley	1	1	47	0	0	2
Cameron Meadows	1	1	488	0	0	1
Charenton	2	1	80	0	1	2
Cheneyville	1	1	15	0	0	0
Convent	1	0	0	0	1	0
Darrow	1	0	0	0	1	1
E. Hackberry	2	2	552	0	0	1
East White Lake	1	0	0	0	1	1
Eola	2	1	195	0	1	1
Gillis	1	1	137	0	0	1
Garden Island	2	2	224	0	0	1
Golden Meadow	6	6	1,895	0	0	6
Grand Bay	2	2	644	0	0	2
Gueydan	1	1	16	0	0	5
Jowa	1	1	631	0	0	2
Jennings	3	1	43	0	2	3
Lake Mongolois	1	0	0	0	1	1
La Fourche Crossing	1	1	50	0	0	0
Lafitte	2	2	549	0	0	2
Lake Pelto	1	0	0	0	1	0
Neale	1	1	275	0	0	1
New Iberia	3	2	619	0	1	3
Paradis	1	1	843	0	0	2
Port Allen	1	1	240	0	0	1
Port Barre	2	2	276	0	0	2
Quarantine Bay	1	1	330	0	0	2
Richie	5	3	369	0	2	2
Sweet Lake	1	1	232	0	0	1
St. Gabriel	2	2	484	0	0	2
S. Crowley	1	1	18	0	0	1
Sulphur	2	2	169	0	0	2
S. Roanoke	1	0	0	0	1	0
Venice	2	2	427	0	0	2
Ville Platte	7	6	1,667	0	1	15
Welsh	1	0	0	0	1	1
West Bay	1	1	864	0	0	2
West Cote Blanche	1	1	391	0	0	1
W. Hackberry	1	1	261	0	0	3
West Lake Verret	2	1	241	0	1	4
Woodlawn	1	1	282	0	0	1
Miscellaneous	8	0	0	0	8	44
Ttl. June	97	65	16,188	1	31	145
Ttl. May	79	55	16,388	4	20	171
Difference	18	10	200	3	11	26

MISSISSIPPI

Tinsley	23	21	15,211	0	2	19
Wildcats	4	0	0	0	4	4
Ttl. June	27	21	15,211	0	6	23
Ttl. May	23	14	9,988	0	9	23
Difference	4	7	5,223	0	3	0

MONTANA

Bowdoin	4	0	0	4	0	16
Cedar Creek	4	0	0	3	1	1
Cut Bank	4	4	380	0	0	15
Kevin-Sunburst	8	3	33	0	5	11
Miscellaneous	0	0	0	0	0	28
Ttl. June	21	7	413	*8	6	71
Ttl. May	18	17	3,022	1	0	73
Difference	3	10	2,609	7	6	2

*9,185,000 cu. ft.

WYOMING

Cole Creek	1	1	150	0	0	1
La Barge	1	1	175	0	0	6
Lance Creek	2	2	1,008	0	0	6
Maverick Springs	1	1	570	0	0	2
Osage	2	1	25	0	1	6
Salt Creek	1	1	140	0	0	2
Miscellaneous	0	0	0	0	0	58
Ttl. June	8	7	2,068	0	1	81
Ttl. May	16	12	4,959	1	3	76
Difference	8	5	2,891	1	2	5

COLORADO

Moffat	1	1	196	9	0	5
Rio Blanco	1	1	50	0	0	7
Miscellaneous	0	0	0	0	0	26
Ttl. June	2	2	246	0	0	38
Ttl. May	3	3	313	0	0	33
Difference	1	1	67	0	0	5

CALIFORNIA

Belridge, N.	1	1	146	0	0	2
Brea Olinda	0	0	0	0	0	1
Capitan	1	1	1,037	0	0	0
Coalinga	9	9	13,379	0	0	9
Coles Levee	3	2	817	1	0	3
Coyote, E.	1	1	35	0	0	1
Coyote, W.	0	0	0	0	0	1
Dominguez	12	11	8,492	0	1	10
Edison	1	1	130	0	0	1
Elk Hills	1	1	380	0	0	3
Elwood	0	0	0	0	0	1
Greeley	3	3	5,572	0	0	6
Huntington Beach	7	7	2,205	0	0	5
Inglewood	3	3	2,736	0	0	7
Kern River	0	0	0	0	0	3
Kettleman N. Dome	1	1	1,479	0	0	11
Long Beach	2	2	216	0	0	5
McKittrick	1	1	280	0	0	2
Midway-Sunset	1	0	0	0	1	4
Mount Poso	9	9	2,465	0	0	3
Raisin City	1	1	24	0	0	1
Richfield	1	1	20	0	0	1
Rincon	1	1	465	0	0	2
Rio Bravo	3	3	4,340	0	0	2
Rio Vista	2	0	0	2	0	1
Rosecrans	0	0	0	0	0	3
Round Mountain	1	1	240	0	0	1
San Miguelito	0	0	0	0	0	1
Santa Barbara	0	0	0	0	0	1
Santa Maria	0	0	0	0	0	1
Santa Maria Valley	6	6	4,565	0	0	6
Strand	0	0	0	0	0	1
Summerland	0	0	0	0	0	1
Ten Section	4	4	6,744	0	0	2
Torrance	3	3	225	0	0	2
Tupman	3	3	2,756	0	0	3
Ventura Avenue	3	2	2,794	0	1	10
Ventura-Newhall	5	2	1,749	0	3	17
Vernalis	1	0	0	1	0	0
Wilmington	20	20	8,369	0	0	10
Wildcats	7	0	0	0	7	33
Ttl. June	117	100	71,660	4	13	177
Ttl. May	67	59	45,778	2	6	201
Difference	50	41	25,882	2	7	24

Personal Paragraphs

J. R. McCHESNEY, formerly a foreman for Pure Oil Co. in the Nowata district of eastern Oklahoma, has been made gas superintendent and transferred to the producing department in the company's Tulsa offices.

DR. K. A. CLARKE, of the University of Alberta, has been appointed temporary chairman of the Alberta Conservation Board, in the absence of R. E. ALLEN, chairman. M. D. KEMP and W. H. KRAFT of the board staff will act as members in the absence of Commissioners J. J. FRAWLEY and F. G. COTTLE.

J. W. FERGUSON, engineer for the Canadian River Gas Co., Amarillo, Tex., last week was elected president of the Junior Chamber of Commerce of that city.

W. F. (BILL) KNODE, Houston, Tex., has resigned as senior member of the engineering firm of Foran, Knode, Boatright & Dixon to enter geological consulting work at Corpus Christi, Tex.

FRANK C. SMITH, Houston, Tex., president of the Houston Natural Gas Corp., has been made chairman of the newly formed Institute of Gas Technology, an affiliate of the Illinois Institute of Technology, at Chicago.

LEON IRBY, land man for the Sinclair Prairie Oil Co., has been placed in charge of the company's land department at Houston, Tex., replacing W. R. THIXTON, who has been transferred to the company's offices at Tulsa.

RICHARD HUGHES, geologist who has been operating in Michigan for the past year, has become associated with C. C. CUMMINGS, PAUL J McINTYRE and H. J. SHERMAN, oil producers with offices in Tulsa. Mr. Hughes was formerly associated with the Burke-Greis Oil Co. for several years.

W. SCOTT HEYWOOD, independent producer from Jennings, La., and formerly a member of the Louisiana Senate, launched a public campaign in his state last week for a constitutional convention to restore the state reorganization plan, after the program was endangered by an adverse court decision. Louisiana's oil-conservation law is tied into the reorganization.

EDGAR H. MUSSER, deputy supervisor for the California State Division of Oil and Gas at Bakersfield, is scheduled for transfer to the Los Angeles office on August 1, where he will occupy a similar position. HAROLD V. DODD, now deputy supervisor at Coalinga, will take the Bakersfield post. E. J. KAPLOW of the division's Taft office will become deputy supervisor at Coalinga. WILLIAM C. BAILEY, also of the Taft office, is to become engineer at the Santa Paula office. FRANK KARMALECH, who is now an engineer at the Long Beach office, will be transferred to the Taft office.

H. P. HOPKINS has been made foreman in charge of Pure Oil Co. properties at Drumright, Okla., following the consolidation of the company's Depew, Okla., operations with those of Drumright.

STAFFORD ROGERS, formerly scout for Magnolia Petroleum Co. at Wewoka, Okla., has been transferred to Colorado City, Tex., as scout in the West Central Texas district. He succeeds HARRY SMITH, who was recently called into service in the Army.

LOUIS BAKER, drilling superintendent for Glenn H. McCarthy, Inc., Houston, Tex., has been made vice president and director of the company. Mr. Baker's former position will be taken over by W. J. (BUDDY) BROWN, formerly assistant division superintendent in the Gulf Coast for the Humble Oil & Refining Co.

W. C. WHALEY, vice president of Barnsdall Oil Co. with offices in Los Angeles, Calif., has been elected president of the California Petroleum Safety Board at its annual meeting, succeeding L. A. CRANSON, vice president of Honolulu Oil Corp. Vice presidents of the board include L. L. AUBERT, Bankline Oil Co., and A. S. HAYES, of Bell & Loffland Drilling Co.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

Owing to the high prices of metal required in the construction of storage tanks, some producers in the Healdton field, Oklahoma, are considering the advisability of resorting to earthen storage.

W. S. Barwick, an architect, has been employed by some of the big producing companies to build several 55,000-bbl. steel tanks in different parts of the field (Augusta, Kans.) and already has started the preliminary work.

F. E. Ackerman, of Deshler, Ohio, who during the past 5 years has been engaged in oil-field work in Upper Burma, India, arrived at Bradford, Pa., last week, bringing with him the effects of the late R. E. Scott, a Bradford oil man who died in India last November.

20 YEARS AGO

According to an eastern trade paper, conditions now prevailing in the oil industry are similar to those of the Cushing overflow before the war. However, the general industrial aspect of affairs in that former oil slump was much better than it is now.

Alvarez Gonzales, a Spanish mining engineer, reports that he has found indications of an "enormous oil field" in Loyoza River Valley, in Spain, 50 miles from Madrid.

In commenting on the oil situation, M. J. Milburn of the Homaokla Oil Co., expressed the view that underbuying rather than overproduction is what ails the oil business.

10 YEARS AGO

Wallace E. Pratt, chief geologist for the Humble Oil & Refining Co., says that to find and produce the volume of oil required by this nation each year we must drill on the average some 20,000 wells.

The demand for copies of The Oil and Gas Journal's latest pipe-line map has been so insistent it has been arranged to offer a number of wall maps to those desiring them.

T. R. BELZER, chemical engineer who has been stationed at General Petroleum Corp.'s laboratories at Vernon, Calif., is serving in the Marine Corps.

F. J. CALLAHAN, assistant secretary, Buckeye Pipe Line Co., Lima, Ohio, is recovering from an accident in which he suffered a fractured knee cap.

J. J. CONRY, Tulsa, who recently retired as president of the Carter Oil Co., accompanied by his son, J. J. Conry, Jr., sailed from New York earlier this month for South America.

J. M. BLOSS, Titusville, Pa., has been elected vice president of the Central Pennsylvania Oil Producers Association, succeeding the late Washington Boyle, of Franklin, who died recently.

WILLIAM HALL, director of industrial relations, Standard Oil Co. of Venezuela, sailed last week from New York for La Guaira, Venezuela, aboard the Grace liner Santa Rosa. He was accompanied by Mrs. Hall.

W. C. DAYHUFF in charge of Standard Oil Co. of California's natural-gasoline research work, has been elected president of the California Natural Gasoline Association succeeding L. V. CASSADAY of Lomita Gasoline Co.

T. R. PREBLE, New York, an executive in the transportation division of Tide Water Associated Oil Co., has been designated as one of three representatives of private motor-truck owners in the organization of Ralph Budd, transportation commissioner, Office of Production Management.

CHARLES GADD, land man with Carter Oil Co., has been transferred from Jackson, Miss., to Mattoon, Ill.

RAUL ZUMELZU, president of Yacimientos Petroliferos Fiscales Bolivianos, returned by air to La Paz last week after a visit in the United States.

OSCAR HUDSON, geologist with Mid-States Oil Corp. has returned to Jackson, Miss., after a short time in the company's Oklahoma City, Okla., office.

MORGAN WALKER and F. W. FLOYD, officials of the Standard Oil Co. of Venezuela, sailed for Venezuela last week. Mr. Floyd was accompanied by Mrs. Floyd.

LEE S. OSBORNE, who has been exploitation engineer of Shell Oil Co., Inc., at Long Beach, Calif., has been appointed executive assistant at the company's San Francisco office.

CHESTER CREBBS, president of Mene Grande Oil Co., sailed for Caracas, Venezuela, last week aboard the Grace liner Santa Paula. He was accompanied by Mrs. Crebbs and Robert Crebbs.

LLOYD JORDAN, gas engineer with the Arkansas Oil and Gas Commission, has taken charge of the newly opened commission office at Lewisville, Ark. The new office will include McKamie, Dorcheat and the new Macedonia area in its territory.

COMER PLUMMER, assistant manager of Pure Oil Co.'s producing division, and THERON WASSON, chief geologist, both of Chicago, left Miami, Fla., July 12 on the South American Clipper for an inspection of company properties in the Lake Maracaibo region in Venezuela.

LEO R. MANNING, Carlsbad, N. M., engineer, has been appointed head of the New Mexico land office's division of petroleum engineering and research. Mr. Manning's duties will deal specifically with determination of compensating royalties from wells offsetting undrilled state leases and with valuations of state leases before their public sale.

A Busy Oil Man

W. R. (Cap) Finney, New York, who is in charge of all pipe-line operations of the Standard Oil Co. of New Jersey, is probably as busy a man as there is in the industry. His company is building one line from Portland, Me., to Montreal, Canada, and is participating in the construction of another from Baton Rouge, La., to Greensboro, N. C. Furthermore, the company is a potential participant in the proposed cooperative lines from the Southwest to the Atlantic seaboard.

W. R. FINNEY

Following his graduation from Stanford in 1912 with a degree in mechanical engineering, he entered the oil business in 1914 and for the next 4 years was engaged in learning the fundamentals as a roustabout, pumper, pipe fitter, construction man, and lease foreman for various companies. Five year after joining the Midwest Refining Co., a subsidiary of Standard Oil Co. (Indiana), in 1916, he was made general superintendent of its gas and electric department with offices in Casper, Wyo.

In March 1928, Mr. Finney was appointed chief engineer of the field division and in 1929 was transferred to Pan American Petroleum & Transport Co., another Standard of Indiana subsidiary, in New York.

Mr. Finney went to Standard Oil Co. of New Jersey in 1932 when that company acquired the foreign properties of Pan American. In 1936 he was elected president of the Oklahoma Pipe Line Co. and vice president of the Ajax Pipe Line Co. and, in addition, served in an advisory capacity for the pipe-line department of the Standard Oil Co. of Louisiana. This necessitated his transfer to Tulsa. Mr. Finney returned to New York in 1939 in a rearrangement of Standard of New Jersey's producing department to coordinate the producing and pipe-line operations of the Standard Oil Co. of Louisiana and Carter Oil Co.

Mr. Finney's principal diversion is golf though he is also reputed to be a fisherman of some ability. He regretfully admits that "his game" has suffered through neglect of late.

MAJ. D. A. WASHBURN, chief engineer, Arkansas Fuel Oil Co., Caster, La., is on active duty in the U. S. Army.

F. G. RAPPAPORT, general manager, British Controlled Oilfields, Ltd., returned to Maracaibo, Venezuela, last week after a visit in this country.

R. C. EDWARDS, scout with Gulf Refining Co., has moved from Yazoo City to Jackson, Miss., to take over some of the duties of JESS JETT who resigned to become an instructor in the C.A.A.

W. L. STEWART, JR., vice president of Union Oil Co. with offices in Los Angeles, Calif., is chairman of the racing committee of the yacht race now being run from Los Angeles to Honolulu.

D. M. KELLEY, drilling superintendent, and MALCOLM McARTHUR, both of Carmi, Ill., were critically injured when derrick was pulled in over a wildcat test in Spring Garden Township, south of Centralia, Ill.

M. O. ATTEBERY, A. J. HARGRAVE and H. M. BRAMLEY, production engineers for Lone Star Gas Co., have been transferred from Palestine to Athens, Tex., new headquarters for this East Texas department.

HOWARD H. WEST, secretary for 15 years to O. D. DONNELL, president, Ohio Oil Co., has been appointed assistant to the president. At the same time H. C. KING was appointed to the company's newly established office of comptroller and F. S. SLICK was appointed assistant comptroller.

LEO J. RANNEY, New York, petroleum production engineer, and CHARLES FAIRBANKS, of Canada, have been engaged by the Government of Australia to develop the Lakes Entrance field there. Inability to produce the field satisfactorily by customary pumping methods has led to engagement of the two engineers to investigate application of other practices. Mr. Ranney is the foremost exponent of horizontal drilling.

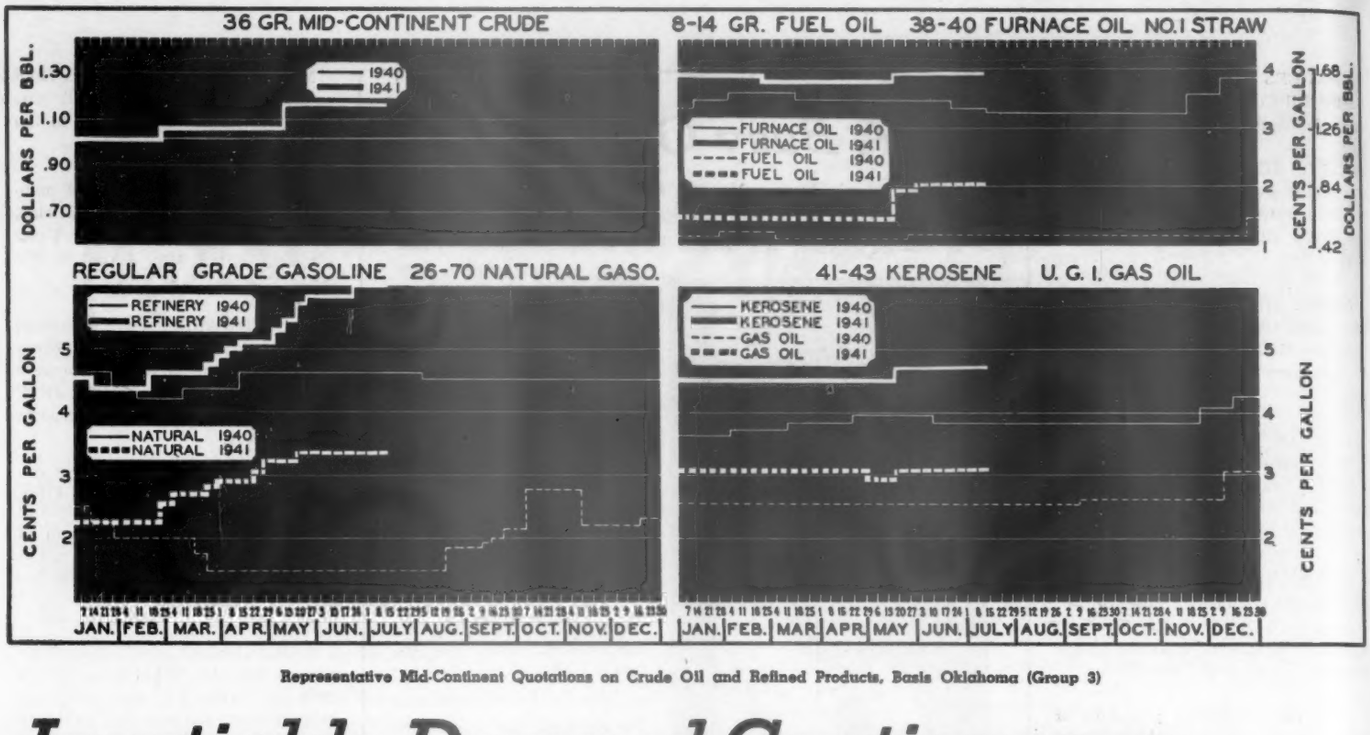
EDWARD WHITE, mechanical engineer trainee and recent graduate of Carnegie Tech, has been transferred from the Shell Oil Co., Inc., offices at Tulsa to Kansas.

EDWARD SWEARER, formerly independent oil operator at Wichita, Kans., has joined the staff of Falcon-Seaboard Drilling Co. to direct its operations in Kansas.

Shifts: J. P. HOLLE, superintendent, Sinclair Prairie Oil Co., from Breckenridge, Tex., to Jackson, Miss.; BOB O. BIRD, superintendent, Phillips Petroleum Co., from Corpus Christi, Tex., to Hobbs, N. M.; R. E. CREVELING, geologist, Shell Oil Co., Inc., from Electra, Tex., to Vernon, Tex.; HENRY H. SHARKEY, engineer, Texas Co., from Marksville, La., to Jonesville, La.; C. M. LOWRY, superintendent, Shell Oil Co., Inc., from Mount Carmel, Ill., to Benton, Ill.; WILL F. EARL, geologist, Ohio Oil Co., from St. Joseph, Mo., to Falls City, Neb.; RALPH H. GRANT, president, Grant & Hawkins, from St. Louis, Mo., to South Haven, Mich.; R. G. DALEY, engineer, Shell Oil Co., Inc., from McPherson, Kans., to Oxford, Kans.; PERRY E. LARSON, engineer, Shell Oil Co., Inc., from Stroud, Okla., to Bristow, Okla.; H. O. RUARK, superintendent, Shell Oil Co., Inc., from Stroud, Okla., to Bristow, Okla.; F. G. BECKMAN, president, Beckman, Inc., from Muskogee, Okla., to Odessa, Tex.; H. S. AUSTIN, Standard Oil Co. of N. J., from Honolulu, T. H., to Elizabeth, N. J.

GILBERT PIERCE, who has been located at the Long Beach, Calif., office of the California Division of Oil and Gas, will soon move to the San Joaquin Valley where he will take charge of the Taft office for the division. His position at Long Beach will be taken by WALTER CROWN, who has been in the Los Angeles office.

PIERRE MINARD has been elected to the presidency of the French Association of Petroleum Technicians, succeeding J. HURD. Mr. Minard entered the petroleum industry at Pechelbronn and Rumania, and has spent all his professional life in the industry. He made a visit to the United States a few years ago to study latest United States developments in the industry.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Insatiable Demand Continues as Mid-Continent Supplies Decline

By H. STANLEY NORMAN

INSATIABLE demand combined this week with limited supplies to draw price advances a step closer for most petroleum products in the Mid-Continent market. Gasoline is just plain hard to locate. Buyers are showing less concern over prices than at any time within the memory of most sellers. Desires of purchasers are strictly focused on dates of loading and delivery, confirming, if any assurance was needed, that most of the current movement is for immediate or near-future requirements.

Sellers and buyers alike are wondering how long current firmness of the market can continue without a breakthrough of prices on the top side of the price structure. There is substantial agreement among elements in the refining and marketing branches of the industry that higher prices would have been realized before this, except for the price-depressing influence of the Office of Price Administration and Civilian Supply. Many refiners believe that chief interest of O.P.A.C.S. in petroleum markets will be devoted to crude prices and quotations to consumers. Still, refiners are unable to advance tank-car prices without risking a bulge in either crude or consumer prices and perhaps both.

Premium Fuel Least Active

Chief strength of the motor-fuel market is currently centered on U. S. Motor and regular gasolines. The demand is particularly brisk for third-grade motor fuel which may be a reflection of the swing of farm-tractor operations to a fuel more volatile than distillate. Refiners point out that demand for premium motor fuels is also sharp but that inquiries for regular and third-grade are slightly more insistent.

Contrary to earlier reports from Chicago, the kerosene tank-car market in the Mid-Continent refining district appears to be stronger than at any time in the past several months. Some of the kerosene currently moving to Middle West markets is doubtless going to storage in anticipation of higher demand this winter. Still, much of the volume now trading appears to be for current requirements. This conclusion is drawn by shippers because of the nature of business which involves repetitive calls from single sources who, suppliers know, are not in position to store kerosene beyond limited-storage capacities.

One factor behind the current movement of kerosene from the Mid-Continent into the Middle West is the lower freight rate prevailing on this product than on distillate fuels of heavier characteristics. The lower rail rates instituted in the middle of June apply to gasoline and kerosene but not to some of the heavier distillate fuels. Buyers in the Middle West are now enabled to obtain delivery on kerosene at approximately the same cost as the heavier distillates, even though the refinery tank-car market for the former material is about 0.5 cent per gallon higher.

Gains of the past few weeks in the refinery tank-car price for Mid-Continent lubricating oils were well supported this week. Suppliers are still unable to draw alongside of orders on their books. The only change in prices quoted for lubricating oils was an advance of 0.25 cent per gallon on paraffin oils which are now quoted at a range of 6.75 to 7 cents per gallon.

North Texas Natural Higher

After a temporary bulge of 0.125 cent per gallon in Oklahoma natural-gasoline prices last Saturday, the market reacted to the previous quotation of 3.375 cents per gallon this week.

The most encouraging factor in the natural-gasoline market, however, was the advance of 0.25 cent per gallon for 26-70 material originating in the North Texas district. Shipments by North Texas manufacturers have been at a high rate during the past 2 weeks, indicating that movement to the Gulf Coast and subsequently to the eastern coastline terminals has been maintained without interruption. Gulf Coast refiners are the chief buyers of North Texas interdistrict shipments of natural gasoline. Gulf refiners normally purchase natural gasoline in quantities correlating with their coastwise shipments of motor fuel. Consequently, the movement of natural gasoline into the Gulf Coast refining district is normally a reasonably accurate barometer to the volume of coastwise shipments of motor fuel.

Refined Oil Market Barometer

Sellers remained in complete charge of the refinery-products market this week. Prices are strictly firm and suppliers are under constant pressure to increase deliveries. Buyers are concerned chiefly with loading and delivery dates rather than in quibbling over quotations. Movement of natural gasoline to the Gulf Coast indicates that shipments in coastwise trade are holding fairly constant.

MID-CONTINENT: Kerosene is one of the more active products.

GULF COAST: Price advanced on high-octane gasoline.

CALIFORNIA: Fuels strong. Gasoline movement routine.

PENNSYLVANIA: Neutral prices advanced sharply.

CHICAGO: Gasoline movement gaining momentum.

Shifts in Prices End Nominal Status of East Coast Markets

By J. P. O'DONNELL

NEW YORK, July 14.—While most products mark time, continued improvement in lubricating oils, evidences of an impending price advance for residual fuel and an indication of softening in wax prices last week relieved the nominal status that had characterized the East Coast refined market since the upward spiral of prices was terminated some weeks ago. Scarcities of lubricating oils and residual fuel oil were major factors in the improvement in these products while too-high prices were viewed as the cause of the weakening in the wax market.

Close observers of the market are inclined to believe that Pennsylvania lubricating oils, particularly neutrals, have reached a ceiling that will not permit further advances. They point to the fact that neutrals are up a minimum of 12 cents from prices that prevailed at the beginning of the year and that low-pour-test material is now offered at prices as much as 14.5 cents above first-of-the-year quotations. In the case of the low quotations on 25-pour, 200-viscosity neutral this is an increase of almost 50 per cent in the past 6½ months.

Inability of jobbers to meet prices that range as high as 39 cents on zero pour, 200-viscosity neutral is reportedly driving out of the Pennsylvania market those who can obtain supplies elsewhere. However, the acute scarcity of light lubricating-oil stocks on the eastern seaboard makes replacement of supply sources virtually impossible. Current Pennsylvania neutral prices are 1 cent above the extraordinary highs that were reached in December 1939, the height of the war boom.

While recent activity in bright and steam-refined stocks has not been so marked, they too have experienced a price rise since the first of the year. Bright stock, 25-pour, currently is reported strong at a minimum of 23 cents. At the beginning of the year it was moving at 12 to 13 cents so that the interim advance has been close to 100 per cent. Steam-refined stock of 600 flash is now quoted at 13 to 14 cents against 8 cents on January 1, up a minimum of 62.5 per cent. Both bright and steam-refined stocks, however, are still considered low by some suppliers who view an increase of 1 to 2 cents as justified.

Improved domestic demand is the principal factor in the lubricating-oil betterment. Exports have been restricted by the inability to secure space on cargo vessels for lubricating oils in package lots, the means by which an important part of the Pennsylvania export trade is conducted. This situation was recently relieved somewhat by departure of two tankers which carried lubes. Still there are, according to reports, large quantities of lubricating oils at New York and Philadelphia docks.

Increasing scarcity of residual fuel oil is given as one reason for the advance last week of prices from 3.810 cents to 4.047 cents in the tank-wagon market for No. 6 fuel oil by two major companies. Residual fuel-oil stocks on the Atlantic seaboard dropped 321,000 bbl. in the first week of July, American Petroleum Institute reports show, and have declined more than 500,000 bbl. since the end of April, a period in which they normally increase.

The advance in the retail tank-wagon price, which amounts to almost 0.25 cent per gallon, is equivalent to slightly less than 10 cents per barrel and therefore is regarded as an indication that Bunker C fuel-oil quotations will be raised accordingly. Bunker C fuel oil is still quoted at $1.35 per barrel by the major companies though several small suppliers have been asking $1.45.

Another reason cited as a possible cause for the higher residual fuel-oil quotations is the increased cost of delivering crude to eastern refineries. When the Standard Oil Co. of New Jersey began delivering crude oil to Bayway from Lima, Ohio, by rail it was at a cost of approximately $1 per barrel. This contrasts with a tanker rate for coastwise delivery of from 50 to 57 cents per barrel. Kansas crude deliveries to Lima were to be made at a rate of 42½ cents per barrel and Texas crude, 52½ cents. In addition, the rail rate from Lima to Bayway is 55 cents, making the total either 97½ cents or $1.07½, depending on the source of the crude.

This is cited only as one instance of the increased cost for Standard of New Jersey is not among the companies which advanced residual fuel oil. These increased transportation costs will necessitate some price adjustment and need for the revisions is becoming increasingly insistent. For this reason, some market observers are anticipating a greater degree of activity in the East Coast market in the near future with price advances, particularly for kerosene and fuel oil.

Refusal of purchasers to meet current quotations of as high as 5.25 cents per pound for crude-scale wax is believed to be having a depressing effect on the market for this product and it is freely predicted that price reductions are imminent. This is a normal offseason for wax and the demand that lifted prices to their present levels is no longer evident. The probability of lower prices was substantiated by the report that a quantity of crude-scale wax offered last week at 4.75 cents was not taken up.

After increasing steadily for the past 2 months, the inventory position of motor fuel on the East

(Continued on Page 103)

Limited Supplies Tighten Gulf Coast Gasoline Price

HOUSTON, Tex., July 15.—Refinery-gasoline sales on the Gulf Coast this week are restricted by scarcity of available material. It was reported there still were open inquiries in the market but that the prospective buyers were unable to fill them.

In line with this tightness, market prices showed further stiffening. The last trade of consequence was a cargo of 83-octane gasoline, which was sold for 6.625 cents. Ordinarily, with markets not so tight, 83-octane gasoline might be sold along with and for about the same price as an 80-octane material. Sellers now are enabled to ask a differential.

Although not offered generally, 80-octane gasoline is quoted at a low of 6.25 cents.

Kerosene, it develops, also is about cleaned up among independent refiners. Only two cargoes now are known to be available from these sources. Major refiners have plenty but this reserve is not being offered on the open market. Several independent refiners at the opening of the week were quoting 4 cents for kerosene. But these sources had none to offer. Those with material were asking 3.5 cents.

Gas oil of No. 2 grade is being offered for 3.5 cents and material is not hard to obtain. However, most sources of supply are not believed to be in distress. At the same time, a tendency to tighten up on gas oils is becoming evident. Several refiners have started cracking their gas oil because of the strengthening gasoline market.

A.P.I. Weekly Refinery Statistics

Week Ended July 12, 1941

	Capacity reporting (per cent)	Total gasoline stocks (bbl.)	Residual fuel-oil stocks (bbl.)	Gas oil and distillate stocks (bbl.)	Daily crude runs (bbl.)
East Coast	100.0	22,364,000	8,262,000	10,835,000	644,000
Appalachian	83.8	3,114,000	517,000	422,000	149,000
Ind., Ill., and Ky.	84.4	16,742,000	3,752,000	4,010,000	680,000
Okla., Kans., and Mo.	80.7	7,039,000	2,070,000	1,493,000	328,000
Inland Texas	63.2	2,196,000	1,273,000	381,000	152,000
Texas Gulf	91.0	11,800,000	7,971,000	6,882,000	1,005,000
Louisiana Gulf	89.1	3,244,000	1,283,000	1,466,000	141,000
N. Louisiana and Ark.	49.9	447,000	435,000	250,000	58,000
Rocky Mountains	50.1	1,416,000	492,000	143,000	68,000
California	90.9	15,049,000	65,129,000	11,135,000	524,000
Total reported	86.3	83,411,000	91,184,000	37,017,000	3,749,000
Est. unreported	.....	6,150,000	1,515,000	795,000	341,000
*Est. total	.....	†89,561,000	92,699,000	37,812,000	4,090,000
*Est. total previous wk.	.....	90,064,000	92,635,000	36,925,000	3,745,000
*July 13, 1940	.....	91,971,000	105,103,000	35,653,000	3,565,000

*Bureau of Mines. †Includes 7,577,000 bbl. aviation gasoline.

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATE)

Week ended July 5, 1941	258,070,000 barrels
Week ended June 28, 1941	259,399,000 barrels
Week ended July 6, 1940	261,732,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

RETAIL OIL MARKETS...

Tank-wagon and filling-station prices on gasoline and kerosene furnished by larger marketing firms

Prices as of July 15, 1941

Taxes

The gasoline quotations given in the following tables include the 1½-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline—Tank wag.	Dlr.	Inc. tax	Kero. tank wag.
Chicago, Ill.	15.6	13.6	4.5	10.3
Decatur	13.9	12.4	4.5	9.0
Joliet	16.4	13.6	4.5	10.3
Peoria	16.2	14.2	4.5	10.1
Quincy	14.9	11.9	4.5	10.0
Davenport, Ia.	16.2	14.7	4.5	10.1
Des Moines	15.9	12.9	4.5	9.8
Mason City	16.2	14.7	4.5	10.1
Duluth, Minn.	17.7	16.2	5.5	10.6
Mankato	17.4	15.9	5.5	10.3
Minneapolis	17.4	15.9	5.5	10.3
La Crosse, Wis.	17.4	15.9	5.5	10.3
Green Bay	17.7	16.2	5.5	10.6
Milwaukee	17.6	16.1	5.5	10.5
Detroit, Mich.	15.9	14.4	4.5	9.6
Grand Rapids	15.9	14.4	4.5	9.6
Saginaw	15.9	14.4	4.5	9.6
Evansville, Ind.	16.9	15.4	5.5	9.6
Indianapolis	17.1	15.2	5.5	9.8
South Bend	17.5	16.0	5.5	10.2
Fargo, N. D.	18.4	16.9	5.5	11.3
Huron, S. D.	17.8	16.3	5.5	10.7
Kansas City, Mo.	14.4	12.9	4.5	9.1
St. Louis	14.4	12.9	4.5	9.8
St. Joseph	15.7	14.2	4.5	8.9
Wichita, Kans.	14.8	12.7	4.5	8.0

*State tax 2 cents, 1-cent city tax, and 1½-cent federal tax.

Exclusive of state general sales taxes.

Discounts to commercial consumers. On purchases per month off tank-wagon prices: 1,000 gal. or more, 1.5 cents off, minimum delivery 25 gal.

Stanolex Fuel Oil in Chicago

Effective June 4, 1941, f.o.b. Chicago, tank-wagon prices: Standard heater oil, 1-99 gal., 8.75 cents; 100-149 gal., 7.75 cents; 150 gal. and over, 7.25 cents. Stanolex fuel oil No. 1, 1-99 gal., 8.5 cents; 100-149 gal., 7.5 cents; 150-399 gal., 7.25 cents; 400 gal. and over, 6.75 cents. Stanolex furnace oil, 1-99 gal., 8.5 cents; 100-149 gal., 7.5 cents; 150-399 gal., 7.25 cents; 400 gal. and over, 6.75 cents. Stanolex fuel oil A, 1-99 gal., 7.75 cents; 100-399 gal., 6.75 cents; 400-749 gal., 5.75 cents; 750 gal. and over, 5.0 cents. Stanolex fuel oil B, 1-99 gal., 7.75 cents; 100-399 gal., 6.75 cents; 400-749 gal., 5.75 cents; 750 gal. and over, 5.0 cents. Stanolex Bunker C fuel oil, 1-399 gal., 6.25 cents; 400-999 gal., 5.25 cents; 1,000 gal. and over, 4.25 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline—Cons'r tank wag.	Dlvided dlr.	Inc. tax	Kero. tank wag.
Ohio points	16.0	15.0	5.5	*9.0

*Includes state tax of 1 cent.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline—Cons'r tank wag.	Net dlr.	Inc. tax	Kero. tank wag.
Atlanta, Ga.	17.75	17.75	7.5	10.0
Augusta	17.75	17.75	7.5	9.5
Macon	17.75	17.75	7.5	10.0
Savannah	16.75	16.75	7.5	9.0
Birmingham	18.25	18.25	8.5	8.0
Mobile	18.25	18.25	9.5	8.5
Montgomery	19.25	19.25	9.5	10.0
Jackson, Miss.	16.75	16.75	7.5	9.0
Vicksburg	16.75	16.75	7.5	8.5
Jacksonville, Fla.	17.75	17.75	8.5	8.0
Miami	17.75	17.75	8.5	8.0
Pensacola	18.25	18.25	9.5	8.0
Tampa	17.75	17.75	8.5	8.0
Lexington, Ky.	16.75	16.75	6.5	9.0
Covington	15.0	15.0	6.5	9.0
Louisville	16.25	16.25	6.5	8.5
Paducah	16.25	16.25	6.5	8.5

Price basis to tank-wagon consumers, effective January 4, 1937, 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax, and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent. All are included in the table.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline—Cons'r tank car	Dlr. tank wag.	Inc. tax	Kero. tank wag.
Atlantic City	13.0	14.0	4.5	7.8
Newark	13.0	14.0	4.5	7.8
Annapolis	13.85	15.35	5.5	9.5
Baltimore	13.25	14.75	5.5	8.5
Cumberland	14.65	16.15	5.5	10.0
Washington, D. C.	11.50	13.00	3.5	9.0
Danville, Va.	15.45	17.45	6.5	10.25
Norfolk	14.25	16.25	6.5	10.00
Petersburg	14.55	16.55	6.5	11.00
Richmond	14.55	16.55	6.5	11.00
Roanoke	15.75	17.75	6.5	10.50
Charles'n, W. Va.	15.55	18.05	6.5	11.5
Parkersburg	14.85	17.35	6.5	11.2
Wheeling	15.25	17.35	6.5	11.8
Charlotte, N. C.	17.40	18.90	7.5	9.3
Hickory	17.95	19.45	7.5	10.3
Mount Airy	17.80	19.30	7.5	9.5
Raleigh	17.15	18.65	7.0	10.3
Salisbury	17.45	18.95	7.5	10.7
Charleston, S. C.	15.25	17.75	7.5	9.25
Columbia	16.10	18.60	7.5	(*)
Spartanburg	16.80	19.30	7.5	(*)

Price basis to Essolene undivided dealers: Dealer tank-wagon price less 0.5 cent per gallon. Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at a time by hose connection, on yearly purchases: From 2,500 to 100,000 gal., consumer tank-wagon price at time and place of delivery: 100,000 gal. per year, consumer tank-car price plus 0.5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less 0.5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gal. or more, consumer tank-wagon price. Single deliveries of less than 50 gal., 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less 0.5 cent per gallon. The above policy also applies in South Carolina, effective January 23, 1939.

*Kerosene business of the company at these points now exclusively handled by dealers.

Pennsylvania and Delaware

ATLANTIC REFINING CO.

	Gasoline—Cons'r tank car	Dlr. tank wag.	Inc. tax	Kero. tank wag.
Philadelphia, Pa.	14.0	15.0	5.5	10.0
Pittsburgh	14.5	15.5	5.5	10.5
Allentown	14.5	15.5	5.5	10.5
Erie	14.5	15.5	5.5	10.0
Scranton	14.5	15.5	5.5	10.5
Altoona	14.5	15.5	5.5	10 5
Dover, Del.	...	15.5	5.5	10.5
Wilmington	...	15.0	5.5	10.0

Price basis to undivided dealers, dealer tank-wagon price less 0.5 cent per gallon.

Discount on kerosene, 2 cents per gallon off tank-wagon price on tank-wagon deliveries of 25 gal. or more at one time.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline—Tank truck	Serv. sta.	Inc. tax	Kero. tank wag.
San Francisco	17.5	18.5	4.5	11.5
Los Angeles	17.0	18.0	4.5	10.0
Fresno, Calif.	18.5	19.5	4.5	12.5
Phoenix, Ariz.	21.5	22.5	6.5	12.5
Reno, Nev.	20.5	21.5	5.5	13.5
Portland, Ore.	20.0	21.0	6.5	13.5
Seattle, Wash.	20.0	21.0	6.5	13.5
Spokane	21.5	22.5	6.5	16.5
Tacoma	20.0	21.0	6.5	13.5

Discount to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gal. and over, advance quantity discount extended at time of delivery, 3 cents. Service-station schedule applies on single deliveries less than 40 gal. On kerosene in tank-car, transport-truck, and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank wagon.

March 18, 1939, split dealer discount was canceled.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline—Comm. tank wag.	Dlr.* tank wag.	Inc. tax	Kero. tank wag.
Albany	14.2	14.7	5.5	7.6
Met. New York	14.4	14.9	5.5	7.9
Buffalo	14.5	15.0	5.5	8.3
Rochester	15.1	15.6	5.5	8.8
Syracuse	14.8	15.3	5.5	8.7
Portland, Me.	14.6	15.1	5.5	8.0
Manchester, N. H.	15.6	16.1	5.5	8.9
Burlington, Vt.	15.2	15.7	5.5	8.2
Boston, Mass.	13.2	13.7	4.5	7.9
Worcester	13.8	14.3	4.5	8 0
Hartford, Conn.	13.9	14.4	4.5	7.5
New Haven	13.3	13.8	4.5	6.8
Providence, R. I.	13.3	13.8	4.5	7.7

*Undivided.

Effective August 8, 1940, the company changed its commercial consumer policy in New York and New England to the following:

Full compartment deliveries: Accounts buying less than 20,000 gal. annually, 0.5 cent above the commercial-consumer price; accounts buying from 20,000 to 120,000 gal. annually, commercial-consumer price; accounts buying 120,000 gal. annually and above, 0.25 cent off consumer price. Split compartment deliveries: Delivery of less than a full compartment, 250 gal., commercial-consumer price plus 1 cent. Steel-barrel deliveries: Commercial price plus 3 cents.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline—Tank wag.	Inc. tax	Kero. tank wag.
Denver, Colo.	14.5	5.5	11.0
Grand Junction	18.0	5.5	12.5
Pueblo	14.5	5.5	9.5
Casper, Wyo.	17.0	5.5	12.0
Cheyenne	16.0	5.5	11.5
Billings, Mont.	18.0	6.5	12.5
Butte	17.0	6.5	13.5
Great Falls	17.0	6.5	12.5
Helena	17.0	6.5	13.0
Salt Lake, Utah	18.5	6.5	14.5
Boise, Idaho	†20.1	6.5	16.5
Twin Falls	†21.1	6.5	17.0
Albuquerque, N. M.	*17.5	7.0	10.0
Roswell	*15.5	7.0	8.5
Santa Fe	‡18.0	7.5	10.0

*Includes city tax of 0.5 cent. †Includes toll-bridge tax of 1 mill. ‡Includes city tax of 1 cent.

Tank wagon represents price to consumers. Dealer represents price to dealers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline—Cons'r tank car	Dlr. tank wag.	Inc. tax	Kero. tank wag.
New Orleans, La.	15.25	17.25	8.5	‡10.0
Baton Rouge	15.25	17.25	8.5	‡10.5
Alexandria	15.25	17.25	8.5	‡10.5
Lafayette	15.50	18.00	8.5	‡10.0
Lake Charles	15.50	18.00	8.5	‡10.0
Shreveport	14.50	17.00	8.5	10.0
Knoxville, Tenn.	18.00	20.50	8.5	12.5
Memphis	16.25	18.75	8.5	10.5
Chattanooga	18.50	19.5	8.5	11.0
Nashville	17.75	19.5	8.5	10.0
Bristol	18.25	18.75	8.5	12.0

Essolene at dealer price less 0.5 cent per gallon to undivided dealers.

‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 18, 1937, deliveries of 50 gal. or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gal. at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less 0.5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gal., consumer tank car plus 2 cents per gallon 50 to 199 gal., consumer tank car plus 1 cent per gallon; 200 gal. and over, consumer tank car plus 0.5 cent per gallon.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline—Tank wag.	Incl. tax	Kero. tank wag.
Texarkana, Ark.	14.0	5.5	6.0
Fort Smith	15.5	7.0	6.5
Little Rock	17.25	8.0	8.0
Muskogee, Okla.	15.5	7.0	8.0
Oklahoma City	15.0	7.0	8.0
Tulsa	15.0	7.0	8.0

Tank wagon represents price to consumers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline—Tank wag.	Dlr.	Incl. tax	Kero. tank wag.
Omaha	17.0	14.4	6.5	9.8
McCook	18.5	15.4	6.5	9.5
Norfolk	18.4	16.9	6.5	10.3
North Platte	18.8	15.9	6.5	10.7
Scottsbluff	18.4	15.5	6.5	10.0

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Texas

	Gasoline—Tank wag.	Serv. sta.	Incl. tax	Kero. tank wag.
Dallas, Tex.	11.5	15.5	5.5	6.0
Fort Worth	11.5	15.5	5.5	7.0
Houston	12.0	16.0	5.5	8.0
San Antonio	12.5	17.0	5.5	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank wagon*
Oleum spirits	16.2
V.M.&P. naphtha	16.5
Cleaners' naphtha	15.5
Stanisol	15.5

*Prices include 3-cent Illinois tax but not 1-cent federal tax nor 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gal. lots if covered by contract.

Canada

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Gasoline—Tank wag.	Incl. tax	Kero. tank wag.
Halifax, N. S.	24.5	10.0	18.0
St. John, N. B.	24.5	10.0	18.0
Montreal, Que.	24.0	8.0	16.5
Toronto, Ont.	24.5	8.0	17.0
Hamilton, Ont.	24.5	8.0	17.0
Winnipeg, Man.	27.5	7.0	22.5
Brandon, Man.	28.0	7.0	22.5
Regina, Sask.	25.0	7.0	20.0
Saskatoon, Sask.	20.8	7.0	22.8
Edmonton, Alta.	25.9	7.0	20.0
Calgary, Alta.	23.0	7.0	18.0
Vancouver, B. C.	21.0	7.0	23.0

Tank-Wagon Changes

Standard Oil Co. of Nebraska reduced the dealer price of regular gasoline 1.4 cents per gallon at North Platte, Neb., effective June 28.

Standard Oil Co. (Indiana) reduced the dealer price of regular gasoline at Quincy, Ill., 1.5 cents per gallon on July 7 and lowered the dealer price 1 cent at Des Moines, Iowa, on July 11.

Crude-Oil Price Change

Price posted by Independent Pipe Line Co. for crude in the Falls City, Neb., field has been advanced 10 cents per barrel since the middle of last week. The company posted an advance of 5 cents per barrel July 9 and followed up with a similar advance July 12, making the price stand now at 85 cents.

Humble Oil & Refining Co., Phillips Petroleum Co., and other buyers met the Texas Co.'s price in the Panhandle district, effective July 9, involving an increase on the part of these buyers of 3 cents per barrel. Continental Oil Co. has met Humble's price in Southwest Texas fields and Ohio Oil Co.'s prices in the Wyoming and Montana district, where postings were advanced 10 cents per barrel.

PRICES OF REFINED PRODUCTS...

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of July 15, 1941
(Most prices in cents per gallon)

The quotations are exclusive of the federal excise taxes of 1.5 cents a gallon on gasoline and 4 cents a gallon on lubricating oils. Octane ratings in Middle West, Mid-Continent, and Southwest are based on A.S.T.M. method of testing.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:

72-74 octane (regular)	.06	.06125
63-66 octane	.05625	.0575
60 octane and below	.0525	.05375
60-62 400 grades:		
72-74 octane (regular)	.06	.06125
63-66 octane	.05625	.0575
60 octane and below	.0525	.05375

NORTH TEXAS—

U. S. Motor grades:

72-74 octane (regular)	.05875	.06
63-66 octane	.0550	.05625
60 octane and below	.05125	.0525
60-62 400	.05	.05875

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:

72-74 octane (regular)	.05875	.06
63-66 octane	.0550	.05625
60 octane and below	.05	.05875

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:

72-74 octane (regular)	.05875	.06
60 octane and below	.05	.0525

CHICAGO (Based on Group 3)—

U. S. Motor grades:

72-74 octane (regular)	.06	.06125
63-66 octane	.05625	.0575
60 octane and below	.0525	.05375
60-62 400 grades:		
72-74 octane (regular)	.06	.06125
63-66 octane	.05625	.0575
60 octane and below	.0525	.05375

PENNSYLVANIA (inland refineries)—

74-76 octane (regular)	.0750	.0775
80 octane (1939 Research)		.0800

CALIFORNIA (domestic movement)—

58-60 400, 65 oct. and higher	.06	.07
54-58 U. S. Motor	.0575	.0625

EAST COAST (domestic)—

U. S. Motor (minimum 72 octane):

New York (Bayonne)*	.075	.080
Philadelphia		.080
Boston		.082
Baltimore		.070
Charleston, S. C.		.075

*All grades of gasoline ⅛ to ¼ cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery ¼ cent lower.

GULF COAST (domestic)—

U. S. Motor grades:

80 (research)		.0625
72-74 octane (leaded)	.0575	.05875
70-72 octane (leaded)	.05875	.06
68-70 octane (unleaded)	.05625	.05875

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70	.03375
Grade 18-55	.04

NORTH TEXAS—

Grade 26-70	.0325
Grade 18-55	.0375

CALIFORNIA—

75-85 375-390	.045	.05

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70	.0325

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 i.b.p., 110-flash, 540-550 e.p.	.0375	.03875
41-43 gr., 300-320 i.b.p., 110-125 flash, 500-520 e.p.	.03875	.04
46-48 gr., 210-230 i.b.p., 480 max. e.p.	.04125	.0425

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

42-44	.0450	.0475
41-43	.04375	.04625

NORTH TEXAS—

41-43	.0425	.04625

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.04375	.04625

ARKANSAS (Ark. and N. La. del.)—

41-43	.04375	.04625

PENNSYLVANIA (inland refineries)—

46	.0575	.06125
45	.0575	.06

CHICAGO (Based on Group 3)—

42-44	.0450	.0475
41-43	.04375	.04625

CALIFORNIA (Pac. Coast market)—

38-40 high-burning test	.045	.055

NEW YORK (Bayonne, N. J.)—

41-43	.052

GULF COAST (domestic)*—

41-43	.035

*Barge price ⅛ cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.04	.0425
No. 1 (white, 38-42)	.03825	.04125
No. 1 straw (38-40)	.0350	.03625
No. 2 straw (32-36)	.0350	.03625
No. 3 zero to 10 (28-32)	.03375	.0350

NORTH TEXAS—

No. 1 (white, 38-42)	.0375	.03825
No. 1 straw (38-40)	.03375	.0350

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2 (32-36)	.0325	.03375

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36	.0325	.03375

CHICAGO (Based on Group 3)—

Range oil	.04	.0425
No. 1 (white, 38-42)	.03825	.04125
No. 2 straw (32-36)	.035	.03625
No. 3 zero to 15 (28-32)	.03375	.035

NEW YORK (Bayonne, N. J.)—

*No. 1	.052
*No. 2	.049
*No. 3	.049

*Barge deliveries ⅛ to ¼ cent under above tank-car price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

No. 5, low pour point (18-22)	.95	.90
No. 6, 15 and above (10-16)	.85	.90

NORTH TEXAS—

No. 5, low pour point (18-22)	.80	.85
No. 6, 15 and above (10-16)	.80	.85

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.80	.85

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.0325	.035
No. 5, low pour point (18-22)	.85	.90
No. 5, 15 and above (18-22)	.85	.90
No. 6, low pour point (10-16)	.85	.90
No. 6, 15 and above (10-16)	.85	.90

PENNSYLVANIA (inland refineries)—

36-40	.05625	.0575

CALIFORNIA—

Los Angeles:

30-40 gas oil, per bbl.	1.10	1.25
24 plus diesel, per bbl.	1.10	1.25
24 plus diesel (bunkers)	1.20	1.35
12-16 bunkers at tidewater)	.75	.85
10-16 (cargo lots)	.75	.85
12-17 (tank cars)	.65	.75
10-17 (high sulfur)	.55	.65
San Joaquin Valley:		
10-18 (tank cars)	.70	.85
24 plus diesel, per bbl.	1.10	1.25
San Francisco:		
24 plus diesel, per bbl.	1.35	1.40
24 plus diesel (bunkers)	1.40	1.50
10-16 (bunkers)	.80	.85

GULF COAST—

No. 2 fuel	.03375	.035
43-47 diesel	.035	.03375
48-52 diesel	.03375	.03625
53-57 diesel	.035	.03875
58-and-above diesel	.03625	.0375
Diesel bunkers		1.45
Bunker C (bulk cargoes)	.85	.90
Bunker C (bunkers)		.85

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.050
28-30 diesel (lighterage 6¼c per. bbl.)		2.00
28-30 diesel (tank cars)	.049	.05
Bunker C (to ocean-going ships in N. Y. Harbor)	1.35	1.50
Industrial fuel (tank cars)		.038

Ligtherage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

200-210 D, 10-25	.24
150-160 D, 0-10	.20
150-160 D, 10-25	.195
100-110 D, 0-10	.195
100-110 D, 10-25	.19
Steam refined:	
600 dark green (untreated)	.125

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):

10 pour point		.275
15 pour point		.265
25 pour point	.23	.25
Steam refined:		
600	.13	.14
650	.135	.145
600 flash	.14	.15
630 flash	.15	.16

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

0-10 pour point:	
150-3	.115
180-3	.12
200-3	.12
250-3	.135
280-3	.145
280-4	.14
300-3½	.155
350-3½	.16
400-3½	.17
500-3½	.175
600-3½	.18
100-2½ paraffin oil 10-25	.0675
10-25 pour point:	
200-3	.115
250-3	.13
280-3	.14
280-4	.135

CALIFORNIA (moving to dom. market)—

Pale oils:		
200-2½-3	.0725	.08
300-2½-3	.0725	.08
400-3-4	.0725	.08
450-3-4	.0725	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.0725	.08
300-5-6	.0725	.08
350-5-6	.0925	.115
400-5-6	.0925	.115
450-5-6	.0925	.115
500-5-6	.095	.115
600-5-6½	.0925	.115
700-6½ plus	.0925	.115
750-6½ plus	.0925	.115
900-6½ plus	.0925	.115

GULF COAST—

Pale oils:		
100-3	.0525	.0575
200-3	.0725	.0775
300-3	.07¾	.08¼
500-3½	.08¼	.09
750-3½	.08¾	.09¼
1,200-3½	.08⅞	.09⅝
2,000-4	.09	.09½
3,000-4		.10½

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pour point		.375
10 pour point		.365
15 pour point		.355
25 pour point	.29	.36
200 vis., at 70° F., 3 color:		
Zero pour point		.39
10 pour point		.38½
15 pour point		.375
25 pour point	.31	.38

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (A.m.p.) w.c. scale	.05	.0525

PENNSYLVANIA (inland refineries)—

122-124 (A.m.p.) w.c. scale	.05	.055
124-126 (A.m.p.) w.c. scale	.05	.0525

NEW YORK—

Wax in bags fully refined:

125-127 (A.m.p.) wax		.0560
128-130 (A.m.p.) wax		.0560
130-132 (A.m.p.) wax		.0585
133-135 (A.m.p.) wax		.0615
135-137 (A.m.p.) wax		.0640
Crude scale:		
124-126 (A.m.p.) w.s.	.0425	.045
124-126 (A.m.p.) y.s.	.040	.0425

Petrolatum in barrels, carload lots:

Dark green	.02625	.03000
Amber	.02875	.03125
Extra amber	.02500	.02625
Lily white	.04875	.05375
Snow white	.05625	.06375
Cream	.04000	.04375

Export Prices

GASOLINE

GULF COAST—

60-62 400	.05125	.065
61-63 390	.05625	.0625
64-66 375	.05625	.0625

LOS ANGELES—

U. S. Motor grades:

Above 69 octane	.0575	.06
65-69 octane	.055	.0575
60-65 octane	.0475	.0525

KEROSENE

GULF COAST—

41-43 water white	.035	.0375

LOS ANGELES—

41-43 water white	.05	.0525

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (f.o.s. in bbl.)—

Cylinder stocks:		
600 S.R. unfiltered	.18	.20
630 S.R. unfiltered	.185	.2025
600 flash, S.R.	.185	.205
650 flash, S.R.	.20	.21
Bright stock:		
Light, 25 pour point	.27	.285

NEUTRAL OIL

200-3 color	.33	.36
150-3 color	.31	.34

PARAFFIN WAX

NEW YORK (prices per lb.)—

123-125 A.m.p.		.0560
125-127 A.m.p.		.0560
128-130 A.m.p.		.0560
133-135 A.m.p.		.0615
135-137 A.m.p.		.0640
Crude scale:		
124-126 w.s.	.05	.0525
124-126 y.s.	.05	.0525

MARKET RECORD OF ACTIVE OIL STOCKS . . .

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1941 High	1941 Low	Week ended July 12 High	Week ended July 12 Low	Week ended July 12 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1940	Com. sh. earn. 1940	Com. sh. earn. 1939	1940 High	1940 Low	1939 High	1939 Low
59½	44	59½	57⅝	59½	Amerada Corp.	788,675	N.P.	50cQ	7-31-41	$2.00	$2.25	$1.56	58½	38½	74½	50
24¼	19½	23⅜	21½	23¼	Atlantic Refining	2,663,999	$25	25cQ	6-16-41	1.00	2.11	1.66	27⅛	18¼	24⅝	18⅛
10½	7	10	8⅝	10	Barber Asphalt Co.	390,223	$10	25c	5-21-40	.50	—.48	1.39	16⅝	8½	21	10¼
10¼	7⅝	10¼	9⅜	10	Barnsdall Oil Co.	2,558,779	$5	15c	6-9-41	.60	.97	.76	13⅜	7⅛	19½	11⅛
6½	5¼	6¼	6	6¼	Consolidated Oil Corp.	13,751,726	N.P.	12½cQ	8-15-41	.72½	.28	.55	8⅛	5½	9⅞	6½
24⅝	17⅜	24⅝	23½	24½	Continental Oil of Delaware	4,682,572	$5	25cQ	6-30-41	1.00	.92	1.35	25	16⅛	31½	19⅞
4¾	3½	4¾	4⅜	4⅝	Houston Oil	1,098,618	$25	....	10-17-30	....	.30	.43	6⅞	3⅝	9⅜	4½
12⅝	9⅝	12⅜	11½	12⅜	Lion Oil Refining	435,815	N.P.	25cQ	7-15-41	1.00	1.05	1.50	14⅜	9	18⅛	10
17⅜	13	17⅜	16½	16½	Mid-Continent Petroleum	1,857,912	$10	40c	6-21-41	.80	1.60	1.42	17⅜	11½	18	11⅛
12½	9⅜	12½	11⅝	12	Mission Corporation	1,378,645	$10	25c	12-20-40	.25	1.01	.87	11¾	7⅛	14⅞	8⅝
7½	4¼	7½	6⅞	7⅛	National Supply	1,155,517	$10	....	12-22-37	....	—.49	—.87	9¾	4⅝	15½	5⅝
9¾	6¾	9¾	9¼	9½	Ohio Oil Co.	6,563,377	N.P.	25c	6-14-41	....	1.02	—.10	8¾	5⅜	10½	6
8⅛	5½	8⅛	7¼	7½	Pacific Western Oil	1,000,000	N.P.	40c	12-19-39	....	—.21	.81	8⅞	5½	11⅞	7
10½	7¼	10½	10	10½	Pan American Pet. Trans.	4,702,945	$5	25c	12-21-40	.25	1.20	1.10	10½	6¾	8⅝	5
45	35¾	45	43⅝	44⅛	Phillips Petroleum	4,449,052	N.P.	50cQ	5-31-41	2.00	2.60	2.21	41¾	27½	46½	31¼
16⅞	14¼	16⅝	15⅛	16⅝	Plymouth Oil Co.	1,038,633	$5	30c	6-30-41	‡1.30	1.38	2.38	22⅝	15	24	17⅛
10⅜	7	10⅜	9⅝	10¼	Pure Oil Co.	3,982,031	N.P.	25c	12-20-40	.25	1.21	1.11	11½	6¾	11⅜	6⅛
10½	7¼	10½	9¼	9½	Richfield Oil Corp.	4,010,000	N.P.	50c	12-21-40	.50	.95	.65	9¼	5⅞	10¼	6⅝
16⅛	12⅛	16⅛	15⅛	16¼	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	6-15-41	1.00	1.05	1.40	20	11	24⅝	15⅛
15½	10⅛	15½	14¼	15½	Shell Union Oil	13,070,625	N.P.	40c	7-21-41	.75	1.05	.77	13⅛	7⅝	17¼	9⅞
30¼	18⅞	30¼	29⅜	30¼	Skelly Oil	995,349	$15	50c	7-30-41	1.25	3.28	1.99	23¼	12¼	29½	15⅛
9⅞	8¼	9½	9	9⅜	Socony-Vacuum	31,206,071	$15	25cSA	3-15-41	.50	1.17	1.10	12½	7⅛	15⅛	10¼
23¾	17⅞	23¾	22⅞	23⅜	Standard Oil of California	13,003,953	N.P.	25cQ	6-16-41	1.00	1.73	1.38	26⅛	16¼	33⅝	24¼
32¼	25½	32¼	31⅜	32	Standard Oil (Indiana)	15,272,020	$25	25c	6-16-41	1.50	2.20	2.23	29	20⅜	30	33⅜
44⅛	33	44⅛	42½	43⅞	Standard Oil of New Jersey	27,280,998	$25	1.00†	6-16-41	1.75	4.54	3.26	46½	29⅞	53½	38
44⅞	34¼	44⅞	44	44⅞	Standard Oil of Ohio	753,740	$25	37½c	6-14-41	2.00	7.44	6.64	41¾	26¼	32¾	17
58¾	50	55¼	52½	54½	Sun Oil	2,434,863	N.P.	25cQ	6-16-41	*1.00	3.03	2.74	65⅞	46¾	66	45⅜
2⅜	1⅜	2⅜	2	2¼	Superior Oil Corp.	1,388,979	$1	10c	12-28-40	.10	.11	.04	2½	1⅛	3⅝	1⅜
42½	34½	42½	39¾	42½	Texas Corp.	10,876,139	$25	50cQ	7-1-41	2.00	2.90	3.02	47⅝	33	50¾	32½
4⅛	2⅞	3¾	3⅝	3⅝	Texas Gulf Producing Co.	888,147	N.P.	10c	6-14-41	.20	.63	.69	4¼	2½	5⅜	3¼
6¾	5¼	6¾	6	6¾	Texas Pacific Coal & Oil	888,236	$10	10c	6-2-41	.40	.54	1.00	8⅝	5⅜	11⅜	7
10¾	9⅜	10¾	10¼	10½	Tide Water Associated	6,371,827	$10	15c	6-2-41	.70	1.14	1.05	12	8¾	14¼	9⅛
14¾	12¾	14¾	14¼	14⅝	Union Oil Co. of California	4,666,270	$25	25c	5-10-41	1.00	.99	1.25	17½	12	19¾	15⅛
30⅞	25⅝	30⅝	29¾	29¾	Union Tank Car Co.	1,177,381	N.P.	50c	6-2-41	1.75	2.22	2.07	29⅞	22¾	24¼	20⅛
2⅜	1⅝	2⅛	2	2	Wilcox Oil & Gas	470,768	$5	10c	2-15-40	....	.35	.77	3⅝	1¾	4¼	2⅜

*Also 5 per cent in stock. †Includes extras. ‡Also 2 per cent in stock. —Deficit.

New York Curb Exchange

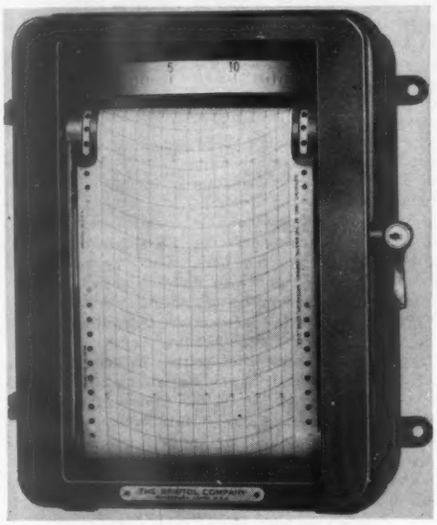
1941 High	1941 Low	Week ended July 12 High	Week ended July 12 Low	Week ended July 12 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1940	Com. sh. earn. 1940	Com. sh. earn. 1939	1940 High	1940 Low	1939 High	1939 Low
¾	¼	½	½	½	American Maracaibo Co.	1,778,415	$1	....	.....	....	—$0.05	—$0.04	1⅛	¼	1¼	⅛
7⅞	5⅛	7⅞	7⅛	7½	American Republics Corp.	1,308,049	$10	10c	7-10-41	....	.78	.14	10¾	4½	11¾	5½
1¾	1	1⅝	1⅝	1⅝	Bridgeport Machine Co.	263,700	N.P.	$1.25	12-30-37	....	—.88	—.95	3¼	1⅜	7¼	2½
44	36½	44	41	44	Buckeye Pipe Line Co.	200,000	$50	$1	6-14-41	$4.00	5.09	3.13	43	28	34¾	26½
110¼	87	92	90	92	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-23-41	6.00	6.33	7.87	117	95	130	108⅝
5⅝	3¾	4¾	4¼	4⅝	Cities Service (new)	3,703,978	$10	....	6-1-32	....	1.72	.68	6¾	4	9¼	4¼
1⅝	¾	1⅝	1⅛	1⅝	Cosden Petroleum	465,332	$1	....	.....	....	....	....	2⅛	⅝	2¼	½
18	12½	18	16¾	17⅝	Creole Petroleum	6,974,356	$5	50cSA†	6-16-41	1.00	.98	1.38	24¼	11⅝	28	16¾
8	3¾	8	7⅛	8	Darby Petroleum	351,390	$5	25c	7-15-41	....	1.12	.03	4⅜	2⅞	7⅛	3⅝
1⅞	1	1⅞	1⅞	1⅞	Derby Oil & Refining	263,162	N.P.	....	.....	....	.12	—.37	2	¾	2⅝	1½
28¾	21¼	22¾	22¾	22¾	Eureka Pipe Line	50,000	$50	50c	8-1-41	2.25	—.49	.63	31	20¼	23	15⅛
38¼	29	38¼	34⅝	37¾	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-41	1.25	2.44	1.69	39⅞	25⅛	45⅛	29¼
63	52¾	61⅝	59¼	61	Humble Oil & Refining	8,987,840	N.P.	37½c	7-1-41	2.00	3.13	3.33	68	47½	71	42½
7	5¾	6⅝	6⅜	6⅜	Imperial Oil of Canada	26,965,078	N.P.	25c	6-2-41	.62½	.65	.71	12⅜	5⅝	17	11⅜
5	2¾	4¾	4¾	4¾	Indiana Pipe Line	300,000	$7.50	20c	11-15-40	*2.80	.09	.33	7¾	3	7⅛	5½
11	8⅞	9⅞	9½	9⅝	International Petroleum	14,324,088	N.P.	50c	6-2-41	1.25	....	1.19	10⅜	8¼	27½	17
2⅝	1¾	2⅜	2⅜	2⅜	Kirby Petroleum Co.	500,000	$1	10c	3-15-41	....	.16	.06	2¾	1⅝	3¾	2⅛
10⅛	8½	9⅛	8¾	8⅞	Lone Star Gas	5,518,347	N.P.	20c	4-22-41	.70	1.17	.98	10¾	7⅝	10½	7⅛
5⅜	4⅛	5	4⅝	5	Louisiana Land & Exp.	2,966,762	$1	10c	6-16-41	.35	.29	.22	6¼	3¾	7⅜	4
10	9½	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	4-10-41	1.00	1.02	1.52	17	9¼	17	14½
3⅜	2½	3¼	3¼	3¼	Middle States Petroleum "A"	291,970	$1	37c	1-31-41	.63	.31	.37	4⅛	2⅜	5⅜	2⅜
8	7	7⅝	7¼	7¼	Midwest Oil Co.	998,474	$10	45c	6-16-41	.90	.88	.99	8½	5½	8⅜	6⅝
6⅛	5⅛	5½	5¼	5¼	Mountain Producers	1,593,584	$10	30cSA	6-16-41	.60	.58	.70	6¼	4⅞	6	4⅞
12⅜	10⅛	11	10⅝	11	National Fuel Gas	3,810,183	N.P.	25cQ	7-15-41	1.00	1.12	.95	13⅛	10	14	11¼
12⅞	10¼	12⅞	12⅜	12⅝	National Transit	509,000	$12.50	50c	6-16-41	1.00	1.08	.91	12½	8¾	9½	7¼
1¼	1	..	..	..	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.03	.02	1¼	¾	1⅜	1
8¼	6⅝	8¼	8¼	8¼	New York Transit	100,000	$5	30c	4-15-41	.60	.91	.88	7¾	5¼	6	4
9¾	8	..	..	..	Northern Pipe Line	120,000	$10	50c	6-2-41	.80	.70	.31	9⅞	6	7	4½
4	2⅝	4	3⅝	4	Pantepec Oil	2,856,872	$1	....	.....	....	....	....	5½	2½	7⅝	4
2¾	1	2¾	2½	2¾	Root Petroleum Co.	336,045	$1	25c	2-1-37	....	.04	.70	3¼	1	5	1¼
2⅝	2⅛	2⅝	2½	2⅝	Ryan Consolidated	298,931	N.P.	10c	12-28-40	....	.43	.16	3	1¼	3	1⅞
8	6½	7¾	7⅜	7¾	Southern Pipe Line	100,000	$10	25c	3-3-41	.50	.81	.25	11¾	4¾	4⅞	3½
43	36⅛	43	40¼	43	South Penn Oil	1,000,000	$25	37½c	6-27-41	2.50	2.10	2.84	44	28	40½	26¾
30½	23	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	50c	7-1-41	6.50	3.22	2.06	35	21	23	18
20¾	17⅞	19	18¾	18¾	Standard Oil of Kentucky	2,604,790	$10	25c	6-16-41	1.30	1.47	1.53	20⅞	16½	20⅛	17¼
2	1¾	1⅞	1¾	1⅞	Sunray Oil	1,975,876	$1	5c	12-20-40	.10	.23	.25	2	1⅜	2⅜	1⅜
3¼	2¾	3	2¾	3	Texon Oil & Land	936,024	$2	10c	6-28-41	.40	.45	.49	3½	2	4	2⅝
3¾	2¼	3¾	3⅜	3⅜	Transwestern Oil Co.	750,000	$10	....	.....	....	—.59	—1.42	3⅜	2	6	2½
⅛	⅛	⅛	⅛	⅛	United Gas Corp.	7,818,959	$1	....	.....	....	—.49	—.55	2⅛	⅜	3⅜	1⅛

*Includes $2.50 capital distribution. †Includes extras. —Deficit.

EQUIPMENT PROGRESS...

Bristol Co. Offers New Strip-Chart Recorders

A newly designed strip-chart recorder is now offered by the Bristol Co., Waterbury, Conn. Many changes

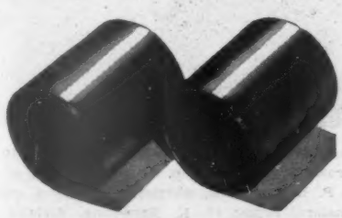


have been made in the construction of these new instruments, including the case design . . . chart drive . . . measuring elements . . . and writing mechanism They are available for recording on a 6-in. strip chart; d.c. volts and millivolts, d.c. amperes and milliamperes, pressure, liquid level, flow, temperature, motion, and for remote recording, using Bristol's Metameter system of telemetering. A copy of Bulletin 570 may be obtained upon request.

Johnson Offers Precast Bronze-on-Steel Bearing

Increased speeds and loads, and the demand for longer life and smoother operation has placed a greater responsibility upon bearings. To meet this condition Johnson Bronze, 508 South Mill Street, New Castle, Pa., has developed a new and unusual bearing —precast bearing bronze on steel.

By casting S.A.E. 64 bronze alloy (copper 80 per cent, tin 10 per cent, lead 10 per cent) in solid bronze bars the metals are united chemically to form a definite copper-tin eutectic, with the lead trapped in the interstices. Thus the grain structure of the alloy—and the resulting bearings—is definitely established. The center of each casting is then removed by drilling. The borings thus obtained are reduced to a powder, treated in a hydrogen furnace to remove all oxides and then firmly bonded to strip steel. The process of manufacturing bearings from bronze on steel, in strip form, is the same as for any other type of sheet



metal bearing, being essentially a stamping and forming operation.

The advantages of precast bearing bronze on steel are: a higher Brinell hardness, a much greater resistance to pounding and shock, plus a comparatively low coefficient of friction. Precast bearing bronze on steel is also available as a graphited bearing.

Company Formed to Develop New Mexico Pumice Deposit

The Barnsdall Oil Co., through its subsidiary, Barnsdall Tripoli Co., has sold to the McAleer Manufacturing Co. of Detroit, Mich., and Whittaker, Clark & Daniels, Inc., manufacturers of minerals, colors and pigments, of New York, its pumice mill at Grant, N. M., and has leased to them a large pumice deposit 8 miles from Grant which will supply the mill with raw material. This is a particularly significant transaction due to the fact that the bulk of fine pumice has always been imported from the Italian island of Lipari. This particular deposit in New Mexico will be able to supply the American market with the finest quality of product of its kind in the world.

The new company will be known as Pumice Corp. of America, a Delaware corporation, and whereas the ownership has been transferred to the McAleer company and Whittaker, Clark & Daniels, the entire operating staff and policies of the company will remain unchanged. Clarence E. Clark of New York has been elected president; N. Bradley Higbie, Jr., of Detroit, vice president; John N. Ebert, of Grant, vice president and general manager; Carlton M. Higbie, of Detroit, treasurer; and Harold G. Robinson, of New York, secretary.

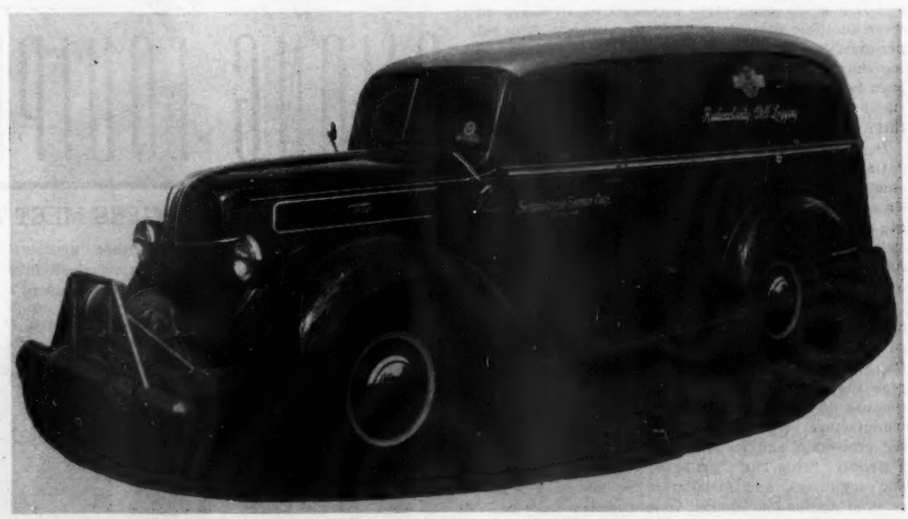
Armstrong Extends Line Of "Side Inlet" Steam Traps

New additions to its standard line of "side inlet" steam traps are announced by Armstrong Machine Works, 868 Maple Street, Three Rivers, Mich. They are designated as No. 811 in the 800-1,000-lb.-per-hour capacity range; No. 812, 1,600-2,000-lb. capacity, and No. 813, 3,000-4,400-lb. capacity. All feature the basic body design which has been used by Armstrong for several years for side inlet traps.

Advantages claimed for this design include: (1) trap cap carrying complete mechanism can be removed without disturbing pipe connections, (2) leaving the trap body permanently in the line obviates any necessity of ever having to handle a vessel filled with hot condensate or having to reprime the trap after such occasions, (3) installation convenience where it is practical to use horizontal, straight-through connections.

All of the new traps are built for operation on pressures up to 250 lb. gage. They are equipped with the standard Armstrong all-stainless steel invertec bucket operating mechanism. All are available with blast-type thermic air vent buckets and internal-type check valves as optional extra equipment.

RADIOACTIVITY WELL LOGGING TO SOUTH AMERICA



Well Surveys, Inc., Tulsa, is helping Britain find oil for its national defense by sending a new radioactivity-well-logging unit to the island of Trinidad, British West Indies. In Trinidad, as in many other older oil fields, little information is available concerning the formations above the main producing sands. As a result, many shallow oil and gas sands were cased off unrecognized, and many wells have been abandoned prematurely.

The process developed by Well Surveys, Inc., is the only one that can be used for logging such wells, since radioactivity well logging is the only method that operates in cased holes. It has been applied with success to workover and perforating programs in oil fields in Oklahoma, Kansas, Arkansas, Illinois, the Texas and Louisiana Gulf Coast, North and West Texas and New Mexico, and now it goes to South America.

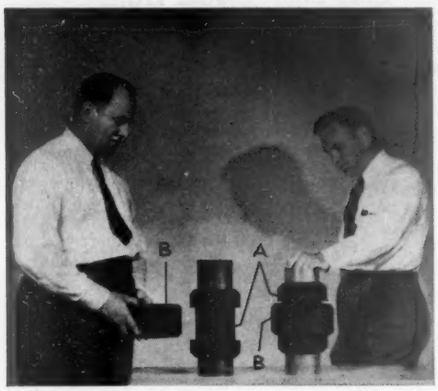
In the United States the service is being offered through the Lane-Wells Co. Recently the Seismograph Service Corp. was licensed to operate in South America.

The South American equipment was specially designed to conform with Trinidad highway laws, and is considerably lighter than equipment destined for domestic use. A special air-conditioned laboratory has been set up in Trinidad for the maintenance and adjustment of the delicate instruments which make up the unit. The instruments will be operated by two Seismograph Service Corp. engineers, Glenn Conklin and Glen Blackledge, who left for Trinidad by plane.

New Drill-Pipe Bearing Announced by E. M. Smith Co.

The Grizzly "Hug-Tite" drill-pipe bearing, for casing and open-hole drilling, is a new product recently announced by E. M. Smith Co. of Los Angeles, Calif.

Shown here with the inventor, Walter Smith, general manager of the above company, this product (see cut) is made entirely of rubber of special formula and consists of two parts: (*a*) the "Hug-Tite" base, made in one solid piece and shaped like a spool, with flanges at each end; and (*b*) the free-spinning "Hug-Tite" bearing that fits over the base between the flanges. The clearance between the bearing and the base, both radially and endwise, is such as to permit the bearing to turn freely without friction; and is lubricated by the mud circulating in the hole which creates an extremely smooth, slippery surface, eliminating practically all friction and wear on these parts.



Walter Smith, inventor (left), demonstrating where Grizzly "Hug-Tite" bearing fits on base installed on drill pipe

In service, when the bearing comes in contact with the formation or casing it stops turning, while the drill pipe and base continue to rotate; thus actually functioning as a positive roller bearing, eliminating torque and stress on the pipe, completely stabilizing the entire drilling string. As the drill pipe is protected against all contact with the formation or casing by the oversize bearing, the drill pipe, tool joints, and casing are completely protected at all times and wear on these parts is reduced to minimum. The rubber-to-rubber contact between the bearing and base, together with the free-spinning, mud-lubricated clearance between these parts, enables the bearing to withstand any contact with the formation or casing with little or no wear.

In order to complete stabilization, it is stated that a Grizzly bearing should be installed on every other single throughout the full length of the drill string. This enables faster rotation and more weight on the bit; without torque or strain, with less danger of twist-offs, reduced wear and tear on machinery, less fuel consumption, and higher efficiencies and economies in drilling operations.

Both the bearing and base of this device are hydraulically installed by unique and especially designed equipment manufactured and operated by E. M. Smith Co. This method permits a much tighter grip on the pipe than is possible by other methods, as well as the use of a far stronger and tougher rubber in the manufacture of the product; both contributing to better protection and longer wear.

Grizzly "Hug-Tite" drill-pipe bearings, protectors and stabilizers, and installation equipment are fully covered by patent applications. Detailed information may be obtained by writing direct to the manufacturer for Bulletin No. 22 OF.

Inferno Offers Improved Types of Firing Controls

The Inferno Co. has just published a new bulletin (No. 8-B). Two different types of firing controls are described as being able to turn the fire and draft on or off as slowly as desired, and to maintain uniform steam pressure using either oil or gas as fuel.

The "regular type" is said to be a vastly improved control, having many new features. A new steam portion is provided to make it easy for the operator to adjust the cut-off pressure and the variation quickly and easily. According to this manufacturer, sudden turning on and off of the fire is now eliminated. This action may now be adjusted to be as slow or as fast as desired by the use of the new double-choke check valve. Another new feature is a special steam-to-fuel connection, which may be used to dilute very rich gas to maintain the proper B.t.u. content for good firing conditions without changing the burner orifices. When burning oil it may be used to steam out the oil side occasionally.

The "double-cylinder type" control employs all the features of the regular type with the added advantage of being able to turn the fire on ahead of the draft and to cut fire draft off ahead of the fire. The two double-choke check valves accomplish this action. Copies of this new firing-control bulletin may be had by writing to Inferno Co., Shreveport, La., Dept. FC-1.

TRADE LITERATURE

FALK CORP., 3001 West Canal Street, Milwaukee, Wis.—Bulletin 8100, 18-page booklet fully illustrating and describing the outstanding features of five types of Falk Airflex couplings. Also contained are typical installation views, a complete discussion with example illustrations of the Airflex coupling "rubber loading in shear" principle, dimension drawings and tables of each type of coupling, and an easy-to-follow section on "how to select Falk Airflex couplings."

CENTURY ELECTRIC CO., St. Louis, Mo.—Unit X167, folder dealing with why Century explosionproof motors have the Underwriters' label and what the different classes of labels mean.

B. F. GOODRICH CO., Akron, Ohio.—Tables on standard fractional horsepower V-belts are a feature of the one-page catalog section on the subject. The section describes the balanced construction of the company's V-belt and the advantages of V-drives.

BAROID SALES DIVISION, 830 Ducommun Street, Los Angeles, Calif.—Vol. 8, No. 1 issue of Drilling Mud, presenting a revised, up-to-date drilling-mud syllabus. Included in the treatise are: (1) Development, functions and use of drilling muds, (2) characteristics of mud which aid in performance of functions. (3) source and evaluation of muds, (4) drilling problems and their solution by means of drilling mud, and (5) mud control by chemical treatment. Included is a glossary and extensive bibliography for each of the topics mentioned above.

Bowen Develops New Tubing Safety Joint

A new safety joint made especially for use in tubing strings has been developed by S. R. Bowen Co., Santa Fe Springs, Calif. This tool insures quick, positive release of the string should the tubing below the joint sand up, the tubing packer stick, or other well conditions prevent removal. Installed in the string above the packer, or above the point where sanding up is liable to occur, this safety joint can eliminate costly cutting and pulling jobs.

The tubing safety joint is similar in construction to the regular Bowen safety joint for drill pipe, consisting simply of a pin and a box section and packers. Standard double-box connections are provided for placing the joint in the string. Other dimensions are also the same as the tubing sizes with which the joints are used: outside diameter is no greater than the tubing couplings, and full opening on the inside is provided so that any tool able to enter the tubing can be safely run through the joint. Fluid passage is not interfered with in any way, and the packers seal off against all leakage inside or outside the string.

Definite mechanical actions are required to break the tubing safety joint. Twisting or pulling strains (frequently necessary when setting packers, using the tubing as a fishing string, or performing other bottom-hole work) will not affect the tight engagement of its two sections. The sturdy construction of the tool enables it to withstand far greater stresses than the pipe with which it is used, and it will deliver the full torque capacity of the string in either direction without unscrewing. To break the joint, however, it is only necessary to place from one to three unscrewing turns in the pipe and lower slowly until the joint breaks. The safety joint is made in all popular sizes. Maintenance is practically nil—the tool can be quickly broken out of the string for inspection during routine well-pulling operations.

AMONG EQUIPMENT MEN...

KOBE DISTRICT MANAGERS MEET TO STUDY PRODUCTION PROBLEMS

Kobe, Inc., manufacturers of the Kobe hydraulic pumping system, recently held a meeting of all mid-western managers and representatives at the company's division headquarters in Oklahoma City, Okla. Various new production problems as occasioned by the rapidly spreading use of hydraulic pumping were discussed. Multiple pumping operations on properties of 2 to 28 wells in a great variety of production zones were discussed, while reports on new procedures in pumping properties as deep as 9,000 ft. were made. Another subject of pertinent discussion was the recent plant expansions effected to expedite delivery of the company's products under current conditions.

Those attending the meeting were, from left to right front row: B. G. Wilkerson, district manager of Oklahoma; P. D. Cornelius, district manager of southern and eastern Texas; H. K. Browning, division sales manager; C. M. Rader, division manager; R. G. Ralph, manager technical service department; W. C. Gilmore, district manager of Texas Panhandle; M. L. Walraven,

Jr., district manager of Kansas; H. K. Ihrig, district manager of Illinois.

Back row: W. F. Slater, Tulsa district representative; E. T. Harrison, Tyler district representative; R. B. Walter, manager of materials department; R. A. Feemster, Oklahoma City district representative; H. W. Wilson, district manager of West Texas; R. J. Lyons, Dallas district representative; C. E. Buchner, Jr., Houston district representative; J. F. Griffin, purchasing agent; and R. J. Jackson, chief accountant.

McConnell Addresses California Nomads Meeting in Los Angeles

The regular monthly meeting and dinner of the Nomads California chapter was held Wednesday evening, July 9, at the University Club in Los Angeles. Principal speaker was Philip C. McConnell of the Bahrein Petroleum Co., formerly chief petroleum engineer for the company on Bahrein Island, who is now spending his leave of absence in southern California. Mr. McConnell gave the Nomads intimate descriptions of native life in the Persian Gulf territory, its pearl fishing industry and tribal customs, and discussed briefly the Italian long-distance bombing foray which disturbed Bahrein oil men last September. Following this talk, Sgt. J. P. Bergman of the U. S. Army Recruiting Service, Los Angeles, presented two sound motion pictures—"The Army on Wheels" and "Wings of Steel"—portraying the mechanized activities of the U. S. Army and Air Service.

Phillip C. McConnell

Initiated into regular Nomad membership at this meeting were Ralph Marshall of Drilling & Exploration Co., J. J. Sigel of Kobe, Inc., Tom Murphy of Martin-Decker Corp., and William McGraw of Western Pipe & Steel Co., with R. R. Smith of National Supply Co. presiding as induction master. Elected to associate membership were Earl M. Boggess, Baker Oil Tools, Inc.; Earl Cater, H. C. Smith Oil Tool Co.; Ralph Clemons, Mission Manufacturing Co.; John P. Isaacs, Reed Roller Bit Co.; Stuart Remmel, Byron Jackson Co.; and Reid O'Neil, Reed Roller Bit Co.

The guests from foreign fields included Clint Adams, United British Oilfields of Trinidad, Ltd.; R. B. Block, International Petroleum Co., Ltd., Ecuador; C. A. Ricks, Colombia Petroleum Co., Venezuela; Carlos Ripamonte, Yacimientos Petroliferos Fiscales, Argentina; and A. W. Rothrock, Colombia Petroleum Co.

The Nomads also discussed plans for their annual golf tournament which will be held August 14 at the Hacienda Country Club, to be followed by a barbecue at the Shell park in Brea. R. J. Eiche, export representative, is entertainment chairman, with George Trembly of Howard Supply Co. serving as chairman of the golf committee. At the conclusion of the meeting, Ernie Fowks of Emsco Derrick & Equipment Co., president of the Los Angeles chapter, read a telegram of greeting from past Nomad Pres. E. L. Decker, Martin-Decker Corp., who is now en route to Alaska with his family on a vacation trip.

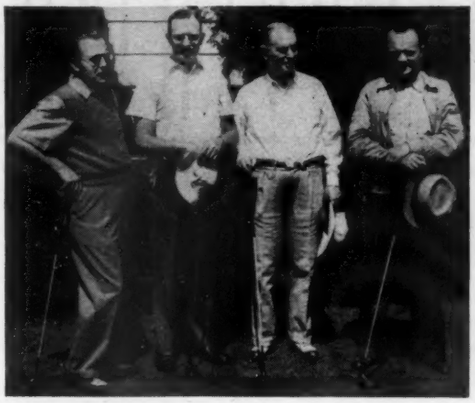
BUSINESS NOTES

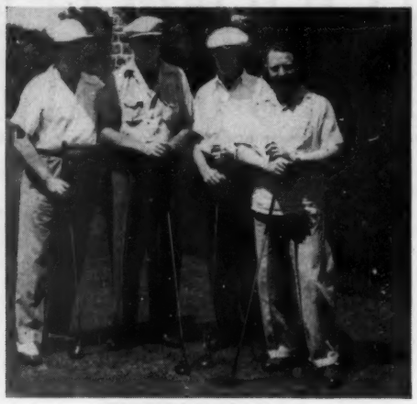
M. J. Tennes, Jr., president of Shafer Bearing Corp., effective July 5 entered active service as captain in the U. S. Army Air Corps with permanent station at the Air Corps Advanced Flying School, Phoenix, Ariz. During the absence of Captain Tennes, the management of Shafer will be under the direction of John F. Ditzell, vice president and general manager.

In addition to active military service by the president of the Shafer Bearing Corp., the company is also exceedingly active in the industrial phase of the national-defense effort. The company is supplying large quantities of bearings to practically all important aircraft manufacturers and to vital defense industries.

The Griscom-Russell Co., manufacturer of heat-transfer apparatus, announces the new location of its Houston office at 1548 Esperson Building, Houston, Tex. The company has also recently moved the Tulsa office to a new location at 810 Petroleum Building.

NEW YORK NOMADS HOLD ANNUAL SUMMER OUTING





Among the Nomads competing in the "kickers" handicap tournament were: (Left) John H. Baird, Val R. Wittich, John Hicklin, W. S. Campbell, (right) Howard Slater, I. Frank Brown (whose 79 was the low gross of the afternoon), W. P. Laseter and Guy E. Daniels

More than 40 members and guests of the New York chapter of the Nomads attended the chapter's annual summer outing which was held recently at the Oakland Country Club at Bayside, L. I. A "kickers" handicap tournament was played during the afternoon and in the evening a dinner was given at the club.

Prize winners in the golf tournament included I. Frank Brown whose 79 was the low gross for the afternoon. Kickers handicap prizes were won by Val Wittich, Walter Fellows, Ken Brandenburg, Herb Maland and R. H. Ingalls. F. J. Olson won the consolation prize and a double consolation prize was awarded to George Eichler.

J. A. Thomas, president of the chapter, presided at the dinner in the evening and gave the principal talk. Other talks were made by a number of the guests. Mr. Brown was master of ceremonies during the dinner and also presented the golf prizes.

V. H. Peterson Elected Vice President of Elliott Co.

Among recent changes in the general office and sales organization of the Elliott Co., Jeannette, Pa., it was announced that V. H. Peterson, who has been general sales manager, has been elected a vice president. He will be responsible for the operation of the district sales offices, all sales, advertising and service activities of the three plants.

V. H. PETERSON

M. A. KING

M. A. King, for the past 9 years manager of the turbine department, and, previous to that, chief engineer of the turbine department, has been appointed manager of engineering, design, and drafting of all products built in the three Elliott Co. plants.

The Bovaird Co. announces the opening of a new store located at 11 Main Street, Seminole, Okla. Clyde Stapleton (center) is the store manager and D. D. (Dutch) Bowersock (right) is field salesman. F. J. (Doc) Robbins (left) is Oklahoma district manager, with headquarters at Oklahoma City

Wm. F. Crawford New President Of Edward Valve Co.

William F. Crawford, vice president since 1937, has been elected president of the Edward Valve & Manufacturing Co., Inc., East Chicago, Ind., filling the vacancy created by the death of W. W. Crawford earlier this year. The new Edward company head has been associated with the organization since 1931 and has had active charge of manufacturing, research, advertising and sales promotion activities for some time. He is a member of numerous technical societies.

Krause Appointed McEvoy Representative in Wharton

The McEvoy Co., Houston, Tex., has announced the appointment of B. F. Krause as representative for the Wharton area of Texas. Mr. Krause attended Texas A. & M. College and has worked for the past 2 years with the Oil Lift Supply Co. in Kilgore, Tex. His Wharton address is 605 Carey St., P.O. Box 267.

Neal Appointed General Electric Representative at Dallas

Frank C. Neal, Jr., has been appointed district arc-welding specialist for General Electric's Dallas, Tex., district office according to an announcement by C. I. MacGuffie, manager of electric welding sales. In this capacity, Mr. Neal will cover the states of Texas, Oklahoma, and part of Louisiana. He succeeds N. M. Voorhies who has been transferred to G-E's Chicago office. A graduate of Kansas University in 1936, Mr. Neal immediately became associated with General Electric in the testing department at Schenectady, N. Y. In 1939 he joined G-E's welding section, handling application engineering and problems relating to welding.

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20 Years Experience
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LEASES—East Texas, La., South Ark. 20 acres up, dollar acre up.—Owners—Address Attorney, Box 1122, Little Rock, Ark.

NEW MEXICO
Oil and Gas Leases and Royalties
ROY G. BARTON, Hobbs, N. M.

FOR SALE: Oil and gas leases and small production located in Kentucky shallow field, also tracts of proven Fluorspar and zinc deposits. Reports on request. W. P. HARLEY, Bowling Green, Kentucky.

M E N E I W C O — State Oil & Gas Leases and Landowner's Royalties — Harry S. Wright, Farmington, N. M. — M E N E I W C O

FOR LEASE: For oil and gas purposes. 240 acres in Anderson County, Kansas. Oil and gas were drilled in at a shallow depth. W. M. DARY, 3605 East Anaheim, Long Beach, Calif.

WANTED TO BUY: Small production or exhausted leases in Kansas, Oklahoma and North Texas. Write location, brief description and price. Box A-553, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE: Large tract of acreage in Plaquemines Parish, Louisiana; In close proximity to drilling operations. For description and further particulars, write, wire or telephone E. W. Fowler, 1227 East Jackson St., Pensacola, Florida, P. O. Box 804, Telephone 2601.

FOR SALE: 10 acres Johnston Co., Okla. NW¼ of NW¼ of SE¼, Sec. 19, Twp. 2S, Range 8 East. Barry, 3505 Legation St., NW, Washington, D. C.

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MEEHAN JUNCTION.....MISS.
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FOR LEASE 10,250 Acres of Oil and Gas Rights Well Located for Oil and Gas in Breathitt and Perry Counties, Kentucky. For Information Write Alan Germer, Box 264, Hazard, Kentucky.

BIG OIL and Gas play, N. E. Kansas Leases, 40, 80, 160, close in. HARRY HAYNES, Grantville, Kan.

Leases and Drilling Blocks

WILL BUY shallow production or exhausted leases near production Texas, Okla., Kansas. Send maps, all information, price. Southern, 2803 Main St., Dallas, Tex.

CASH paid for producing gas or oil wells anywhere. Old wells considered. Will help drill proven leases. G. Gibbs, 7700 Geary, San Francisco, Cal.

HAVE a block of leases in Southwestern Oklahoma open for deal with parties that qualify able to drill well for equitable division of acreage. Good Geology. Write if interested. Philo Dempsey, Roosevelt, Okla.

EAST TEXAS Woodbine—Trinity sand wildcats starting on Major Company blocks offer quick play 10 to 50 for one bets. E. CROFT, PROCTOR, TEXAS.

INVESTORS investigate Land Bargains near 54-Million-Dollar Shell plant just allowed, and oil acreage, 75 cents acre. E. M. ADAMS, MARSHALL, TEXAS.

Geophysical Service

LET US LOCATE your well with the Gravitational Selector, the answer to the safe development of new pools. It is the quickest, the surest, the cheapest and gets RESULTS when other systems fail. Write Geologist, 14957 Lakewood Heights Boulevard, Lakewood, Ohio.

Legal Blanks

BURKHART'S legal blanks and general forms serving Mid-Cont. oil field since 1908—Okla. Kans. N. Mex. Tex. Ala. Ark. Fla. Ga. Ill. Ind. Ky. La. Mich. Miss. Mo. Neb. N. Dak. Tenn. Wyo. Free catalog samples on request. Burkhart Ptg. & Sta. Co., 115 S. Cinn., Tulsa, Oklahoma.

Help Wanted

REFINERY EQUIPMENT INSPECTOR, qualified to carry on actual refinery equipment inspection, interpret results and combat corrosion problems. Inspection would be primary duty but would be expected to do general engineering work during slack period. Inspection experience necessary. Write, stating qualifications and salary expected. P. O. Box A-550, The Oil and Gas Journal, Tulsa, Okla.

WANT a good sideline to sell the oil trade? Drop us a card—New Jersey Chemical Co., P.O. Box 2603, Tulsa, Okla.

GRADUATE ENGINEER, experienced in inspection of oil refinery equipment and materials. Give details of previous experience, education and salary expected. Attack small photograph and give draft status. Reply to P. O. Box 2527, Houston, Texas.

Situations Wanted

PRODUCTION engineer, 15 years' experience in oil industry, construction of plants, pipe lines; 5 years on water flood and repressure of stripper properties. Age 38. Box A-561, The Oil and Gas Journal, Tulsa, Okla.

REFINERY executive, superintendent. Well versed in designing, building and efficiently operating skimming and cracking plants. Best references. Box A-570, The Oil and Gas Journal, Tulsa, Okla.

Royalties

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma

OUR READY MARKETS Enable us to pay cash for producing royalty acreage, lots, units and oil payments. GLOBE SECURITIES CO., LTD., Registered Bonded Dealers, Oklahoma City, Okla.

MAPS, information, valuations, well reports, etc., on royalties and producing properties, Texas and New Mexico. ROYALTY OWNERS SERVICE, P. O. Box 1535, Fort Worth, Texas.

WE BUY & SELL all types of Oil and Gas Royalties. Sales restricted to registered dealers only. Grimes Royalty Co., Tulsa Loan Bldg., Tulsa, Okla.

Incorporations

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

CAPITAL SEEKERS
Put your project before 260 Key-Men. Cost trifling. Details free. AMSTER LEONARD, Fox Theater Building, Detroit, Michigan

Equipment Wanted

WANTED: All makes of used Diesel Engines, preferably "Caterpillar" Diesels Write price, condition and location to Fabick Tractor Co., Box 503, Salem, Ill.

WANTED—Late model Caterpillar Diesel with bull dozer, new or used, size 50 or under. Terry Carpenter, Inc., Scottsbluff, Nebraska.

WANTED 100,000 ft. of good used 4, 6, 8, 10 and 12 inch pipe, plain or coupled. Write or wire Daniel A. Moritz Co., McKeesport, Pa.

WANTED: 3 or 4 inch Bignal and Keeler pipe machine with quick opening chuck. American Supply Company, Box 455, Duncan, Okla.

WANTED TO BUY! Pipe threading machine, 1¼" to 4"—4" to 12". Must be reasonable. Galoob Iron & Metal Co., Healdton, Okla.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

For Sale—Equipment

FOR SALE at Seminole Warehouse—3" and 4" Fig. 505 Centrifugal Pumps, unrepaired. $5.00 and $10.00 each. I.T.I.O., Bartlesville, Okla.

FOR SALE — ABSORBERS — 4—72" x 30' Southwestern Make 16 trays 75# W.P. W. S. Smith, 523 Thompson Bldg., Phone 2-5473, Tulsa, Okla.

FOR SALE at Oklahoma City, Oklahoma: 25 sets 4" 15# SS Reliegs complete for Angle Iron Drilling Derricks. I.T.I.O., Bartlesville, Okla.

FOR SALE: 4—3000 gallon Butler Twin Cylinder casing-head transport trailer tanks. 35 lbs. working pressure. One 2250 gallon regular gasoline trailer tank. Will sell all or part of this equipment. Salt Creek Freightways, 344 Industrial Avenue, Casper, Wyoming.

FOR SALE: 6—40 Gallon Foam Outdoor Type Mounted Fire Extinguishers. I.T.I.O. Co., Bartlesville, Okla.

FOR SALE: Gas Meters. Orifice and Positive. George R. Milner, Box 457, Okmulgee, Oklahoma.

FOR SALE at Seminole Warehouse: 20 H.P. Bessemer Gas Engines as is—$75.00 each. I.T.I.O., Bartlesville, Okla.

$3500.00 BUYS complete steam drilling rig in N. Louisiana, ready for work. Inventory on request. Claude L. Johnson, Attorney, Whitney Bldg., New Orleans, La.

FOR SALE Oklahoma City: 40 Set American Steel Bull Wheel Posts without Bronze Bearing, $35.00 set. I.T.I.O., Bartlesville, Okla.

1—PARKERSBURG SC-11 Pumping Unit, Stroke Range from 60" to 32" with motor, V-rope drive, in strictly first class condition. JOS. GREENSPON'S SON PIPE CORP., NAT'L. STOCK YARDS, ST. CLAIR CO., ILL.

5—80 HP Type X Bessemer Gas Engines Direct Driven Compressors. Can furnish with 6¼" x 20" to 18" x 20" compressor cylinders. W. S. Smith, 523 Thompson Bldg., Tulsa, Okla. 2-5473.

FOR SALE at Oklahoma City: Large quantity 65, 70, 75 and 85 hp. oil field boilers, repaired and unrepaired. I.T.I.O. Co., Bartlesville, Okla.

FOR SALE: Large Gasoline Plant now being dismantled. Bessemer machinery, tanks, regulators, pipe of all sizes, and other miscellaneous equipment. GILBERT PIPE & SUPPLY, Electra, Texas.

FOR SALE at Oklahoma City: A quantity of repaired and unrepaired duplex piston steam pumps, 6 x 4 x 6 and 10 x 3½ or 4½ x 10. I.T.I.O. Co., Bartlesville, Okla.

FOR SALE—14,000' of 12" ID Pipe formerly used for gas line with Dresser couplings. Price reasonable.
The Interstate Pipe & Supply Co.
Marietta, Ohio

FOR SALE at Seminole, Okla., Warehouse: 10,000 ft. 2⅞" O.D. S.S. upset 11½ thread used tubing. I.T.I.O. Co., Bartlesville, Okla.

TANK TRUCKS

Hendrickson Diesel Train, 6 wheeler, 6300 Gallons, Diamond T, 6 wheeler, 3000 gallons. Freuhauf semi-trailer, 3000 gallons.

NATIONAL TRUCK SALES, INC.
3393 Archer Ave. Chicago, Ill.

FOR SALE at Bartlesville: 1—2A National used Drilling Machine. I.T.I.O., Bartlesville, Okla.

CLASSIFIED ADVERTISING RATES

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times
3 Lines	$1.05	$1.80	$2.55	$3.30
4 Lines	1.40	2.40	3.40	4.40
5 Lines	1.75	3.00	4.25	5.50
6 Lines	2.10	3.60	5.10	6.60
7 Lines	$2.45	$4.20	$5.95	$7.70
8 Lines	2.80	4.80	6.80	8.80
9 Lines	3.15	5.40	7.65	9.90
10 Lines	3.50	6.00	8.50	11.00

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	1 time	$5.00
1 Inch	13 times	4.50 per inch
1 Inch	26 times	4.00 per inch
1 Inch	52 times	3.50 per inch

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma